DOCUMENT RESUME

ED 480 180 EC 309 773

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TITLE	Longitudinal Study of the Vocational Rehabilitation Services Program. Final Report 1: How Consumer Characteristics Affect Access to, Receipt of, and Outcomes of VR Services.
INSTITUTION	Research Triangle Inst., Durham, NC.
SPONS AGENCY	Rehabilitation Services Administration (ED), Washington, DC.
PUB DATE	2003-05-00
NOTE	156p.; For Final Report 2, see EC 309 774.
CONTRACT	HR92022001
AVAILABLE FROM	For full text: http://www.ed.gov/offices/OSERS/RSA/Research/studies/index.html.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC07 Plus Postage.
DESCRIPTORS	Career Counseling; *Disabilities; Employment Patterns; *Employment Services; Federal Aid; Federal Programs; Higher Education; Longitudinal Studies; *Participant Characteristics; Predictor Variables; *Program Effectiveness; Program Evaluation; Referral; Salaries; Secondary Education; Severe Disabilities; *Supported Employment; Transitional Programs; *Vocational Rehabilitation

ABSTRACT

This report is the first in a series of four final reports that present the findings of the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program. Initiated in fall 1992, the study has tracked VR participation and post-VR experiences of applicants to and consumers of VR services (n=8,500) for up to 3 years following exit from the program. Findings indicate: (1) individuals were more likely to be accepted for VR services if their disability was significant, congenital, classified as either mental retardation or hearing impairment and they had higher self-esteem; (2) participants were more likely to achieve an employment outcome if their disability was a vision impairment, hearing impairment, mental retardation, or orthopedic impairment, they had higher gross motor function, had greater self-esteem, were working at application for VR services, their desire to obtain assistive technology was a motive for applying for VR services, and they had more dependents; and (3) participants were more likely to achieve a competitive employment outcome if they had higher gross motor function, higher cognitive function, were working at application for VR services, had higher job earnings, and had greater knowledge of different jobs. Appended are groups of supplemental tables on the following: (1) Access to VR Services; (2) Receipt of VR Services; (3) Achievement of Employment Outcomes; (4) Achievement of Competitive Employment Outcomes; (5) Characteristics of Consumers with Significant and Nonsignificant Disability; (6) Correlations between Consumer Characteristics and Eligibility, Receipt of Services, Employment Outcomes, and Competitive Employment Outcomes; and (7) Odds Ratios. (Contains 20 tables, 18 exhibits, and 11 references.) (CR)

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ED 480 180

Longitudinal Study of the Vocational Rehabilitation Services Program

Final Report 1: How Consumer Characteristics Affect Access to, Receipt of, and Outcomes of VR Services

SUBMITTED TO:

Rehabilitation Services Administration
U.S. Department of Education

in partial fulfillment of requirements under
ED Contract No. HR92022001

May 2003

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EC 309773

Longitudinal Study of the Vocational Rehabilitation Services Program

Final Report 1: How Consumer Characteristics Affect Access to, Receipt of, and Outcomes of VR Services

Becky J. Hayward
Holly Schmidt-Davis

ED Contract No. HR92022001

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Executive Summary

This report is the first in a series of four final reports and several research briefs that present the findings of the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program, a study that RTI is conducting for the Rehabilitation Services Administration (RSA), U.S. Department of Education, under Contract No. HR92022001. The broad purpose of the study is to assess the performance of the state-federal VR services program in assisting eligible individuals with disabilities to achieve positive, sustainable economic and noneconomic outcomes as a result of their receipt of VR services. This report examines the extent to which demographic and other characteristics of individuals with disabilities affect their access to and receipt of VR services, as well as the outcomes of those services.

Initiated in fall 1992, the longitudinal study has tracked VR participation and post-VR experiences, for up to three years following exit from the program, of a nationally representative sample of applicants to and consumers of VR services. The study's sample acquisition and data collection activities began in January 1995 and were completed in January 2000, with sample acquisition occurring over a two-year period and each of the study's 8,500 participants tracked for three years.

The study implemented a multistage design that involved selection of a random sample (with probability proportional to size) of 40 local VR offices (located in 32 state VR agencies in a total of 30 states) and, among those offices, a sample of 8,500 applicants and current and former consumers of VR services. The study implemented a cohort design that involved randomly selecting 25 percent of the sample from the population of persons at application to VR, 50 percent of the sample from the population of persons who were already accepted for and receiving services, and 25 percent of the sample from the population of persons at or after they exited VR services.

Data collection included computer-aided interviews with study participants, abstraction of data from consumers' case records, and mail surveys to VR agencies. A battery of baseline interviews conducted with each study participant at the time of entry into the study obtained

information on work history, functioning, vocational interests and attitudes, independence and community integration, and consumer perspectives on their VR participation. A follow-up interview administered for three subsequent years varied according to the individual's stage in the VR process at the time of interview. Records abstraction included consumer characteristics and detailed information on services; records were abstracted when the consumer entered the study and quarterly until that person exited VR. Agency instruments included mail surveys of office managers in participating VR offices, counselors, and other office staff, as well as a state policies and procedures form. These instruments were administered at initiation and termination of the study's data collection activities, with annual updates from the local office manager surveys. The study differs from prior studies of the VR program in that it offered the opportunity to collect extensive data on individuals, services, and outcomes, expanding previous analytical bases and allowing a more thorough assessment of VR results than had previously been possible.

Specific study questions that this report addresses are as follows:

What characteristics of individuals with disabilities affect their access to and receipt of VR services and outcomes of those services?

Specifically:

What are the characteristics of consumers who apply for services, including their:

- **preservice earnings profiles;**
- **functional abilities;**
- **types and significance of disabilities;**
- **interests and motivations;**
- **demographic characteristics;**
- **membership in special populations;**
- **education; and**
- **work history?**

Of the consumers designated by VR agencies as having a significant disability, what are their characteristics?

To address these questions, the study compared the characteristics of groups of VR applicants, consumers, and former consumers. For the issue of access, we compared applicants who were accepted for VR services with those not accepted for services. To examine receipt of services, we compared the characteristics of persons accepted for services who entered VR services with those of persons accepted who decided to drop out of VR before initiating services

under an Individualized Plan for Employment (IPE). Regarding employment outcomes, we analyzed characteristics of persons who achieved an employment outcome following services compared with those of persons who received services but exited VR without achieving an employment outcome. Next we examined the characteristics of persons whose employment outcome was in the competitive labor market in comparison with persons exiting VR with a noncompetitive employment outcome. Finally, we examined similarities and differences between persons whose disability met the VR program's criteria for classification as significant or most significant and persons whose disability was nonsignificant. Findings from these analyses will be used in connection with later analyses of the relationships of services and outcomes, given consumer characteristics.

Factors Associated With Access to VR Services

Approximately 13 percent (or 21.3 million persons) of working-age Americans have a disability (National Health Interview Survey, 1994-95), and, according to a recent study, as many as 3.3 million of those persons (or 16 percent) might benefit from VR services (Overman and Schmidt-Davis, 2000). In FY 1995, the VR program served around 1.25 million persons, or about 37 percent of those persons who might have benefitted from services (FY 1995 RSA-911 data). The program accepted over 80 percent of those who applied for VR services. Our findings regarding the characteristics of persons accepted for VR services, in comparison to those who applied but were not accepted, include the following.

Individuals were more likely to be accepted for VR services if:

- their disability was significant or most significant;
- their disability was congenital rather than acquired;
- their disability was classified as either mental retardation or hearing impairment;
- they had higher self-esteem;
- if working at application, they were working at a job in clerical or sales occupations;
- if not working at application, they were a student, unpaid family worker, or volunteer.

Individuals were less likely to be accepted for VR services if:

- their disability was a nonorthopedic physical impairment;
- they were working at application in supported or extended employment;

- they were working at application at a job in a field other than clerical or sales occupations.

Factors Associated With Receipt of VR Services

Some persons accepted for VR services chose to exit the program prior to initiation of services under an IPE. Persons eligible for VR services who dropped out of the program prior to service initiation represent around 12 percent of the VR population nationally. Although the characteristics of persons entering services were similar to those of persons who exited without participating, they did differ in some ways. Our findings regarding characteristics of individuals with disabilities that affect receipt of services include the following.

Individuals accepted for services were more likely to receive VR services if:

- they were receiving financial assistance other than SSI/SSDI;
- they had higher gross motor function;
- they had greater knowledge of specific jobs;
- their desire to obtain assistive technology devices or services was a motive for applying for VR services.

Individuals accepted for services were more likely to exit the program prior to receiving VR services if:

- they were receiving SSI or SSDI at entry;
- they had never worked two consecutive weeks.

We note, however, that the differences between the two groups were relatively small, as might be expected given that persons in both groups had been accepted for VR services.

Factors Associated With Achievement of an Employment Outcome

At the end of the VR longitudinal study's data collection period, 17 percent of the study population was continuing to receive VR services three years after they entered the study, 45 percent had achieved an employment outcome, and 21 percent had exited VR after services without an employment outcome. Adjusted for the number of persons still receiving services,

about two-thirds of VR consumers achieved an employment outcome as a result of VR services. Findings regarding characteristics of these persons include the following.

Persons who received VR services were more likely to achieve an employment outcome if:

- their disability was a vision impairment, hearing impairment, mental retardation, or orthopedic impairment, as opposed to another type of disability;
- they had higher gross motor function;
- they had greater self-esteem;
- they were working at application for VR services;
- their desire to obtain assistive technology devices or services was a motive for applying for VR services;
- they had more dependents than did other consumers.

Persons who received VR services were less likely to achieve an employment outcome if:

- they were receiving SSI or SSDI;
- they were receiving other forms of financial assistance;
- their desire to obtain postsecondary education was a motive for applying for VR services;
- their race/ethnicity was other than white.

Factors Associated With Achievement of a Competitive Employment Outcome

Of persons achieving an employment outcome as a result of VR services, 77.9 percent were working at jobs in the competitive labor market, while 22.1 percent held noncompetitive jobs. Given the difference in short- and longer-term earnings between competitive and noncompetitive outcomes, the extent to which VR consumers are able to enter the competitive labor market is a key issue addressed by the study. Findings regarding characteristics of VR consumers that may affect achievement of a competitive employment outcome include the following.

Persons who received VR services were more likely to achieve a competitive employment outcome if:

- they had higher gross motor function;
- they had higher cognitive function;
- they were working at application for VR services;
- they had higher earnings at their most recent job prior to VR application;
- they had greater knowledge of different jobs;
- they had greater knowledge of the nonmonetary benefits of jobs.

Persons who received VR services were less likely to achieve a competitive employment outcome if:

- their disability was vision impairment, mental illness, or mental retardation;
- their disability was significant or most significant;
- they were receiving SSI or SSDI;
- they were older.

Characteristics of VR Consumers With Significant/Most Significant Versus Nonsignificant Disabilities

Over four-fifths of persons who are eligible for and receive VR services have a disability that meets the VR program's criteria as significant or most significant. While the Rehabilitation Act, as amended, provides the definition of "significant disability," the definition and criteria for classifying someone as having a "most significant" disability are left to the states. Previous analysis of data from the longitudinal study have shown that the two groups—persons with significant and persons with most significant disabilities—are highly similar. Consequently, we combined the two groups in the analyses on characteristics of persons with significant/most significant versus nonsignificant disabilities.

Consumers with significant or most significant disabilities differed from those with disabilities classified as nonsignificant on the following characteristics:

- their disabilities were more often mental illness, mental retardation, vision impairment, or traumatic brain injury and less often nonorthopedic physical impairment;
- they were twice as likely to be receiving public financial assistance at entry and six times as likely to receive SSI/disabled;
- they had more often received special education services in high school and had less often completed high school;

- they more often had no work history, and if they had a work history, had more often been unemployed for at least two years prior to application for VR services;
- if employed at application, they more often were working in supported or extended employment and worked fewer hours per week; and
- they had more serious functional limitations and less familiarity with the labor market.

Chapter 1

Introduction

This report is the first in a series of four final reports and several research briefs that present the findings of the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program, a study that RTI is conducting for the Rehabilitation Services Administration (RSA), U.S. Department of Education, under contract number HR92022001. The broad purpose of the study is to assess the performance of the state-federal VR Services Program in assisting eligible individuals with disabilities to achieve positive, sustainable economic and noneconomic outcomes as a result of their receipt of VR services. This report examines the extent to which demographic and other characteristics of individuals with disabilities affect their access to and receipt of VR services, as well as the outcomes of those services.

The report's organization is as follows. Chapter 2 presents findings on the characteristics of persons with disabilities who apply for VR services, addressing the question of program access through comparisons of the characteristics of persons accepted for VR services with those of persons who are not accepted for services. Chapter 3 contains findings regarding receipt of VR services, addressing the question of service receipt through comparisons of the characteristics of persons who are eligible for and obtain VR services with those of persons who are eligible for services but drop out of VR prior to initiation of services under an Individualized Plan for Employment (IPE). Chapter 4 presents analyses of the characteristics of persons who obtain an employment outcome as a result of VR services, addressing the question of outcomes through comparisons of the characteristics of persons who achieve an employment outcome as a result of VR services with those of persons who fail to achieve an employment outcome following receipt of services. Chapter 5 contains findings regarding type of employment outcomes, addressing this issue through comparisons of the characteristics of persons who achieve a competitive employment outcome with those of persons whose employment outcome is noncompetitive. Chapter 6 contains findings on characteristics of persons with significant disabilities through comparison of their characteristics with those of VR consumers whose disabilities are classified as nonsignificant, and Chapter 7 contains a summary of findings. Extensive tables that report findings discussed throughout the report appear in Appendices A through F.

Overview of the Study's Mandate and Design

Initiated in fall 1992, the Longitudinal Study of the Vocational Rehabilitation (VR) Services Program addresses key questions of interest to Congress, RSA, state VR agencies, and consumers about the performance of the state-federal VR program. The study's congressional mandate, contained in Section 14 of the Rehabilitation Act, as amended in 1992, directs the Secretary of the U.S. Department of Education to conduct a longitudinal study of the VR program:

> (f) (1) To assess the linkages between vocational rehabilitation services and economic and noneconomic outcomes, the Secretary shall continue to conduct a longitudinal study of a national sample of applicants for services.
> (2) The study shall address factors related to attrition and completion of the program through which the services are provided and factors within and outside the program affecting results. Appropriate comparisons shall be used to contrast the experiences of similar persons who do not obtain services.
> (3) The study shall be planned to cover the period beginning on the application of the individuals for the services, through the eligibility determination and provision of services for the individuals, and a further period not less than 2 years after termination of services (Section 14 (f)).

In response to this mandate, the study tracked VR participation and post-VR experiences, for up to three years following exit from the program, of a nationally representative sample of applicants to and consumers of VR services. The study's sample acquisition and data collection activities began in January 1995 and were completed in January 2000, with sample acquisition occurring over a two-year period and each of the study's 8,500 participants tracked for three years.

The study implemented a multistage design that involved selection of a random sample (with probability proportional to size) of 40 local VR offices (located in 32 state VR agencies in a total of 30 states), and, among those offices, a sample of 8,500 applicants and current and former consumers of VR services. The study implemented a cohort design that involved randomly selecting 25 percent of the sample from the population of persons at application to VR, 50 percent of the sample from the population of persons who were already accepted for and receiving services, and 25 percent of the sample from the population of persons at or after they exited VR services.

Data collection included computer-aided interviews with study participants, abstraction of data from consumers' case records, and mail surveys to VR agencies. A battery of baseline interviews conducted with each study participant at the time of entry into the study obtained information on work history, functioning, vocational interests and attitudes, independence and community integration, and consumer perspectives on their VR participation. A follow-up interview administered for three subsequent years varied according to the individual's stage in the VR process at the time of interview. Records abstraction included consumer characteristics and detailed information on services; records were abstracted at the time the consumer entered the study and quarterly until that person exited VR. Agency instruments included mail surveys of office managers in participating VR offices, counselors, and other office staff, as well as a state policies and procedures form. These instruments were administered at initiation and termination of the study's data collection activities, with annual updates from the local office manager surveys.

The Study's Information Goals, Conceptual Framework, and Reporting Design

The VR longitudinal study has been designed to answer the following questions. (The questions that are addressed in this report [Report 1] appear in bold text below.)

- What short- and long-term economic and noneconomic (e.g., independent living, community integration) outcomes do VR applicants and consumers achieve as a result of their participation in VR? (Report 2)
- **What characteristics of individuals with disabilities affect their (1) access to and receipt of VR services, and (2) short- and long-term outcomes? (Report 1)**
- To what extent does receipt of specific VR services contribute to successful consumer outcomes? (Report 2)
- In what ways and to what extent do local environmental factors influence VR consumers' services and outcomes? (Report 3)
- In what ways and to what extent do the operations, resources, and organizational climate of VR agencies influence consumers' services and outcomes? (Report 3)

- Given the relationship among consumer characteristics, contextual factors, and VR services, what are the results of the VR program? (Report 4)

Specific issues that this report addresses include the following:

What characteristics of individuals with disabilities affect their access to and receipt of VR services and outcomes of those services?

Specifically:

What are the characteristics of consumers who apply for services, including their

- **preservice earnings profiles;**
- **functional abilities;**
- **types and significance of disabilities;**
- **interests and motivations;**
- **demographic characteristics;**
- **membership in special populations;**
- **education; and**
- **work history?**

Of the consumers designated by VR agencies as having a significant disability, what are their characteristics?

Conceptual Framework

The study's conceptual framework, which organizes the study's information goals and research questions, starts with the assumption that the outcomes of VR services are a function of the types of consumers entering the program, the economic conditions affecting the local labor market, the organizational resources and culture of the VR agency and its local service offices, and the services that consumers receive. Exhibit 1-1[dfb1] is a representation of the conceptual framework, with its components and the relationships among them shown as interconnected boxes. Each of the study's four final reports focuses on a different subset of the framework's components, as explained later in this chapter. The present report examines the relationship between consumer characteristics and outcomes, as highlighted in Exhibit 1-1.

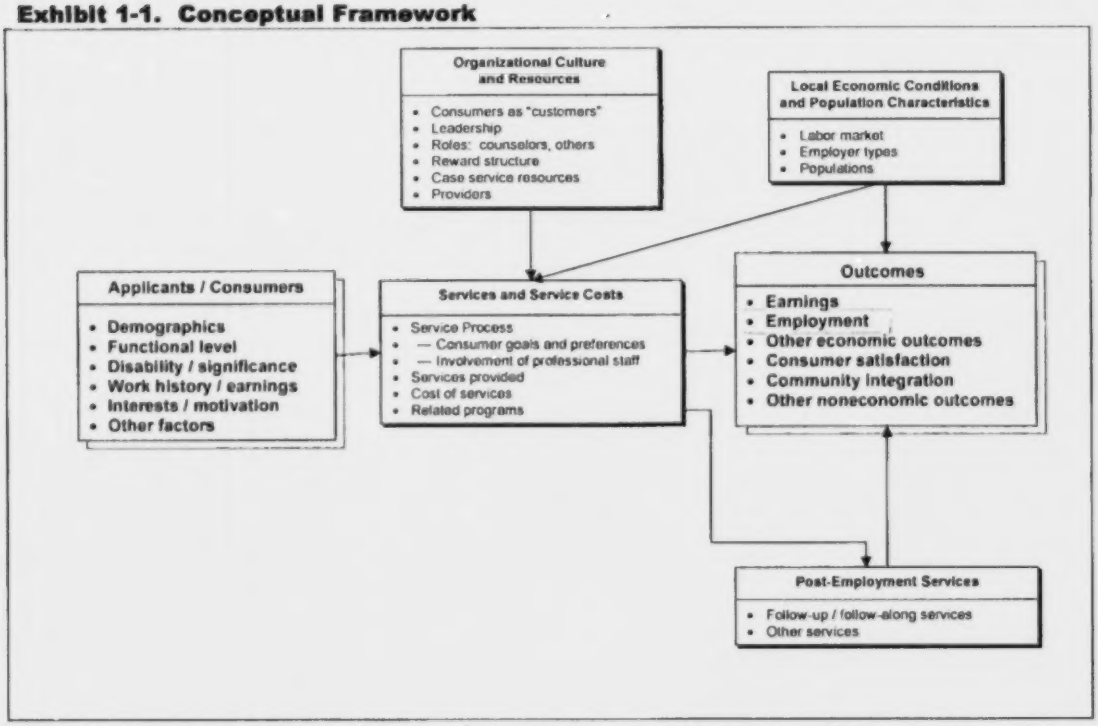
The model described in this framework can be expressed as follows.

Outcomes are a function of:

- the characteristics of *applicants and consumers*,
- *services* and service costs,
- *local economic and population characteristics*, and

- the *organizational culture and resources* in the local agency office, where *outcomes* are defined as: earnings, employment, other economic outcomes, consumer satisfaction, community integration, and other noneconomic outcomes.

Exhibit 1-1. Conceptual Framework



This general model has been used as the basis for analysis in numerous other VR studies. However, other studies have not had access to the wealth of data that the longitudinal study has collected, including a number of important pre- and post-program measures of consumer experience and long-term outcomes. In addition, there have been few efforts to examine the impact of the VR system itself on consumer outcomes. This longitudinal study offered the opportunity to collect extensive data on individuals, services, and outcomes, expanding previous analytical bases and allowing a more thorough assessment of VR results. For each of the major components in the model, we discuss conceptual and design issues relevant to this study.

We developed the conceptual framework to organize the hypotheses we held about the relationships among the concepts represented by the components and to guide the study activities. Elaborating the variables within each component helped determine the data

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collection plans and the study questions. This, along with the hypothesized relationships among the components, led to our analytic activities.

Each of the study's major questions focuses on relationships between two or more components of the conceptual framework. For example, to answer the question, "To what extent does receipt of specific VR services contribute to successful consumer outcomes?", our analyses examine the data from the *Services and Service Costs* component, the *Outcomes* component, and the statistical relationships among those variables. As described below, each of the longitudinal study's final reports focuses on a different subset of study questions and components of the conceptual framework.

Applicants/Consumers. The VR system is not an entitlement program, but serves eligible applicants in an environment of funding and service constraints. The effect of the VR program is in part due to the range of disabilities, the significance of persons' disabilities, the degree of work experience, and the work attitudes consumers bring to the VR experience. There are also identified differences in the likelihood of acceptance, and successful closure, related to age, sex, race, education level, disability type and significance, and other consumer descriptors.

To date, most analyses of the state-federal VR system have been limited to differential patterns of achieving an employment outcome. They have also been limited to existing consumer descriptors as available in RSA's R-911 data files. The VR consumer base has been changing significantly, moving from a consumer base with needs for physical restoration (industrial accidents, war injuries) to an increasing percentage of persons with learning disability, mental illness, traumatic brain injury, and other cognitive disabilities, and to persons with limited or no work history, problematic work behaviors, and other barriers to employment. The traditional indicators of consumer disability type, or nominal indicators of "significance," do not adequately differentiate among consumers or applicants. Additional measures (such as functional level, work history, interests and motivation, and receipt of financial assistance) will contribute greatly to our understanding of differences in caseloads, differences in applicants and accepted consumers, and explanation of outcomes.

Services and Service Costs. We use "services" broadly to include the consumer's VR process, including work with the counselor, assessment specialists, and others from

application through closure and postemployment services. This list of services includes equipment, adaptive devices, supplies, and professional and other services directly paid for by the agency through purchase of services, as well as internal resources such as counselor time, assessor time, and other staff time directly spent with the consumer, and services arranged with other providers and funding sources, as "comparable benefits." This study gathered data on a list of services that is much more detailed than normally reported to RSA in the R-911 and other RSA reporting, and also allows for a basis for estimating service costs.

Postemployment Services. Postemployment services are available to consumers after completing the VR program, if such services will facilitate retention of the placement. While a wide range of counseling and services are available to consumers after case file closure that assist consumers with job retention, these services are unevenly provided. Provision of adequate postemployment services may affect both job retention and recidivism.

Organizational Culture and Resources. The VR program comprises 80 general, combined, and blind state VR agencies, each with its own resources (in light of differences in state levels of support for VR), internal organization, management philosophy, and organizational culture. Resources include fiscal resources available for purchase of services, a critical mass of effective service delivery professionals, and availability and accessibility of service providers, or vendors.

In addition to the availability of resources is the existence of an organizational culture, or climate, that supports effective service delivery. In recent years, attention has increasingly focused on the influence of organizational culture within agencies on the effectiveness of their programs. Established in early work by Deming, the field of quality management as a whole has shifted from a concern with information and control to a concern with human factors. In human service agencies, human factors are especially important for delivering high-quality services (Bowen and Schneider, 1988). The human organization that creates quality is characterized by its culture of quality; key elements of the culture of quality are training and participation. The following indicators are important to measure in assessing organizational climate: management commitment to quality, extent of barriers to employee participation and

teamwork, effectiveness of communication between supervisors and employees, practices in numerical goals and quotas for employees, and company-wide training and education in quality. The organizational culture is viewed as an influencing factor on both quality of services and resulting service outcomes.

Local Population and Economic Environment. Within the national state-federal program, VR services are delivered under widely varying conditions. Localities vary in their urban or rural nature, in the availability of jobs, and even in the prevalence of work disability in the state population. In examining the success of the VR program, it is useful to control for those external factors that may affect services or likelihood of outcomes. Thus, external conditions—exogenous factors in terms of VR discretion—should be taken into consideration in our conceptual framework.

Outcomes. A range of outcomes is relevant to this study, including both economic and noneconomic outcomes. VR traditionally has reported one outcome, the achievement of an employment outcome, as the key measure of program success. Within this measure is a variety of types of successful outcomes, from placement in a job in the competitive labor market to work as a homemaker or unpaid family worker. Amount of earnings at closure is another available outcome measure in the existing information system. Many of the previous analytical and theoretical efforts in this field have recommended gathering income data longitudinally to measure more accurately both the magnitude and the duration of employment-related outcomes. A variety of economic measures of outcomes is relevant to this study, including employment at exit from VR services and at one, two, and three years following closure; competitive employment at each of those time points; and earnings at each of those time points.

In addition to measures of income and job retention, a number of noneconomic outcomes can serve as indicators of success or gain in VR. These include independent living, community integration, satisfaction with employment, and satisfaction with VR services.

Reporting Design

Definitive findings that address the study's research questions are the focus of a series of final reports. In addition to four final reports, other study products will include a series of research briefs that address more restricted topics of interest relevant to the operations and performance of the VR program. These reports, in combination with the four interim reports[1] already completed and numerous research memoranda prepared over the study period, will yield comprehensive answers to the study's primary research questions and to a number of other topics of interest to policy makers, researchers, consumers, and practitioners. In addition to the final reports of study findings, other study deliverables include a methodology report and public use data files with full documentation.

This report focuses on the *Applicants/Consumers* component of the framework and the relationship of those variables to portions of the *Outcomes* component, specifically eligibility for VR, receipt of VR services, and achievement of an employment outcome, including achievement of competitive employment.

The Second Final Report will examine the relationship between the *Services and Service Costs* component and the *Outcomes* component of the framework, taking into account the findings of the first report regarding consumer characteristics. In addition, it will describe the services consumers receive and the short- and long-term outcomes they achieve.

The Third Final Report will build on the prior two reports by looking at the additional influence of two other components of the framework on consumer outcomes – that is, the *Local Economic and Population Characteristics* and the *Organizational Culture and Resources* components

[1] The first interim report (Hayward and Tashjian, 1995), completed in 1995, contained profiles of the local offices participating in the study and their environments based primarily on analyses from the 1990 decennial census and a mail survey of each of the 37 local VR offices participating in the study. The second interim report (Hayward and Tashjian, 1996), completed in 1996, described (1) characteristics of current and former VR consumers; (2) history of labor force participation among VR consumers; and (3) consumers' perspectives of their VR services, service providers, and other aspects of their involvement with the VR program. The third interim report (Hayward, 1998), completed in 1998, contained descriptive findings on characteristics of persons who achieved an employment outcome, including work history and details of post-VR employment and earnings status. The final interim report (Hayward and Schmidt-Davis, 2000) contained findings regarding the VR participation of transitional youth with disabilities.

and their relationship to consumers' short- and long-term outcomes. The Fourth Final Report will encompass the entire conceptual framework by synthesizing all study findings and by addressing the following overall study question: Given the relationship among consumer characteristics, contextual factors, and VR services, what are the results of the VR program? We have also planned two research briefs, *Analysis of Consumer Referral and Acceptance Rates* and *Costs of Eligibility Determination*, that will examine issues of more limited scope than those in the longer reports.

Limitations of the Study's Data

As noted earlier, the longitudinal study implemented a design that permits national estimates of characteristics, services, and outcomes among persons with disabilities who applied for VR services, including persons who received VR services and those who applied for services but exited prior to receipt of services. The study implemented a carefully designed two-stage, stratified random sampling design that would permit development of the best available national estimates of the VR consumer population. In reviewing the findings in the study's reports, the reader should be aware of the following limitations of this design.

- Study findings reflect the study's data collection period, which occurred between 1995 and the end of 1999; therefore, findings do not reflect recent changes in the program that may be having an effect on VR services and outcomes;

- In instances where sample sizes are very small (e.g., less than one percent of the sample), findings should be viewed with caution; in general, we do not describe such findings other than including them in tables (e.g., blind reader services, received by 0.3 percent of VR consumers). Small sample sizes may affect findings for groups in which the incidence of disability is small and for analyses that involve reporting of various characteristics in combination;

- The study was designed to provide national estimates of VR services and outcomes and does not provide estimates at the level of State VR agencies or local VR offices. No statements can be made about participants, services, or outcomes for individual agencies or offices.

- The study is not experimental in nature; that is, we studied participants as they received the services that agencies would normally provide – participants were not randomly assigned to specific services. Thus, we cannot conclude that specific services cause specific outcomes. Nevertheless, our analyses, in which we control for differences in individual characteristics, provide an indication of the relationships among services and outcomes.

Chapter 2

Access to Services

What characteristics of individuals with disabilities affect their access to VR services?

The state-federal VR program delivers services to over one million persons each fiscal year; approximately 450,000 persons exit the program each year, with the percentage of those achieving an employment outcome averaging over 60 percent. To provide a context for understanding issues of program access and services, we looked at data available from outside this study to estimate the size of the population of persons who could benefit from VR services relative to the working-age population and relative to the findings of this study with regard to the numbers of individuals accepted for VR services. Table 2-1 reports data from the National Health Interview Survey–Disability Supplement (NHIS-D) and RSA-911 consumer reporting system that address prevalence of disability in the working-age population and need and

Table 2-1. Overview of Need and Demand for VR Services, Based on Analysis of National Health Interview Survey and VR Longitudinal Study Data

		Percent				
	All Persons	All persons	Working-age persons	Working-age persons with disabilities	Needing VR services	Receiving VR services
All persons*	260,760,000	100.0				
All working-age persons*	159,165,023	61.0	100.0			
Working-age persons with disabilities*	21,285,023	8.2	13.4	100.0		
Working-age persons who could benefit from VR services*	3,347,342	1.3	2.1	15.7	100.0	
Persons with disabilities receiving VR services**	1,250,314	0.5	0.8	5.9	37.4	100.0

* Source: National Health Interview Survey, 1994-1995.
**Source: RSA-911 data, FY 1995.

demand for VR services.[1] As shown, 61 percent of the nation's population in 1995 was of working age; 13 percent of those working-age persons reported having a disability. A recent study (Overman and Schmidt-Davis, 2000) suggests that as many as 3.3 million working-age persons with disabilities, or 16 percent, might benefit from VR services if the program had sufficient resources to serve them. In 1995, the VR program served about 37 percent of those who might have benefitted from services, or approximately 1.25 million persons.

To examine the issue of who obtains access to VR services, we compared applicants who applied for and were accepted for VR services and persons who applied for but were not accepted (i.e., did not obtain access to services). Characteristics we analyzed included the following:

- disability characteristics;
- receipt of SSI or SSDI at application;
- functional status and selected psychosocial characteristics;
- demographic characteristics;
- educational status and achievement;
- work history and preservice earnings; and
- career-related interests and motivations, including vocational goals.

In this chapter, we summarize key findings regarding differences and similarities between the two groups of applicants for these characteristics. The findings are weighted national estimates of persons who applied for VR services.[2] Persons not accepted for VR services represent 16 percent of all applicants. The tables in Appendix A indicate which of the findings are statistically significant differences between the two groups, and unless otherwise indicated, differences described in the text are statistically significant ($p < .05$). Each section heading notes the relevant appendix tables.

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[1] NHIS-D data were collected in 1994 and 1995; RSA-911 data are for fiscal year 1995. Because of sampling issues associated with the NHIS-D, the two data files cover approximately the same period.

[2] A separate methodology report contains details of the study's sampling and data collection design.

Disability (Table A-1)

Eligible and ineligible[3] applicants differed in terms of disability characteristics. As shown in Exhibit 2-1, 82 percent of eligible applicants had disabilities that VR classified as significant or most significant, while 65 percent of ineligible applicants were classified this way. These data reflect the mandate in the Rehabilitation Act that VR agencies target VR services to individuals whose disabilities are significant or most significant.[4] It is interesting that a relatively high proportion (nearly two-thirds) of persons determined not eligible for services also had significant/most significant disabilities. Eligible applicants were also more likely to have a congenital, versus acquired, disability (28 versus 16 percent) than were those not accepted for VR services. Finally, in some instances, disability type differed between the two groups. More eligible applicants had mental retardation or hearing impairments than did persons who were ineligible for services (9 versus 3 percent and 8 versus 3 percent, respectively). On the other hand, fewer eligible persons had nonorthopedic physical disabilities than did those in the ineligible group (12 versus 18 percent).

Receipt of SSI or SSDI (Table A-2)

Nearly half of eligible applicants (48 percent) reported receipt of some form of financial assistance at application for VR services, compared with 44 percent of persons who were not eligible (Table 2-2). Financial assistance could include SSI-disabled, SSDI, private insurance, support from family, and the like. A larger percentage of the eligible group was receiving SSI-disabled (17 percent of all eligible applicants, compared with 11 percent of those in the ineligible group), while almost the same percentage of eligible persons was receiving SSDI at application (12 versus 11 percent). Among persons who were receiving some form of financial assistance at application to VR, more eligible applicants reported their own earnings as their primary source of support than did applicants who were not eligible (5 versus 2 percent). For the majority of

[3] Case files of persons not accepted for VR services documented a variety of reasons for ineligibility. In addition to documentation that the individual did not have a disability or vocational handicap, some individuals' files indicated failure to cooperate or refusal of further services as reasons for lack of acceptance for VR services. Detailed examination of subsets of the group documented as not accepted for services is beyond the scope of the current analysis.

[4] The statutory definition of "significant disability" appears in Section 7 (21) (A) of the Rehabilitation Act of 1973, as amended. The definition of "most significant disability" appears in Section 7 (21) (E).

Exhibit 2-1. Disability Characteristics by Eligibility for Services

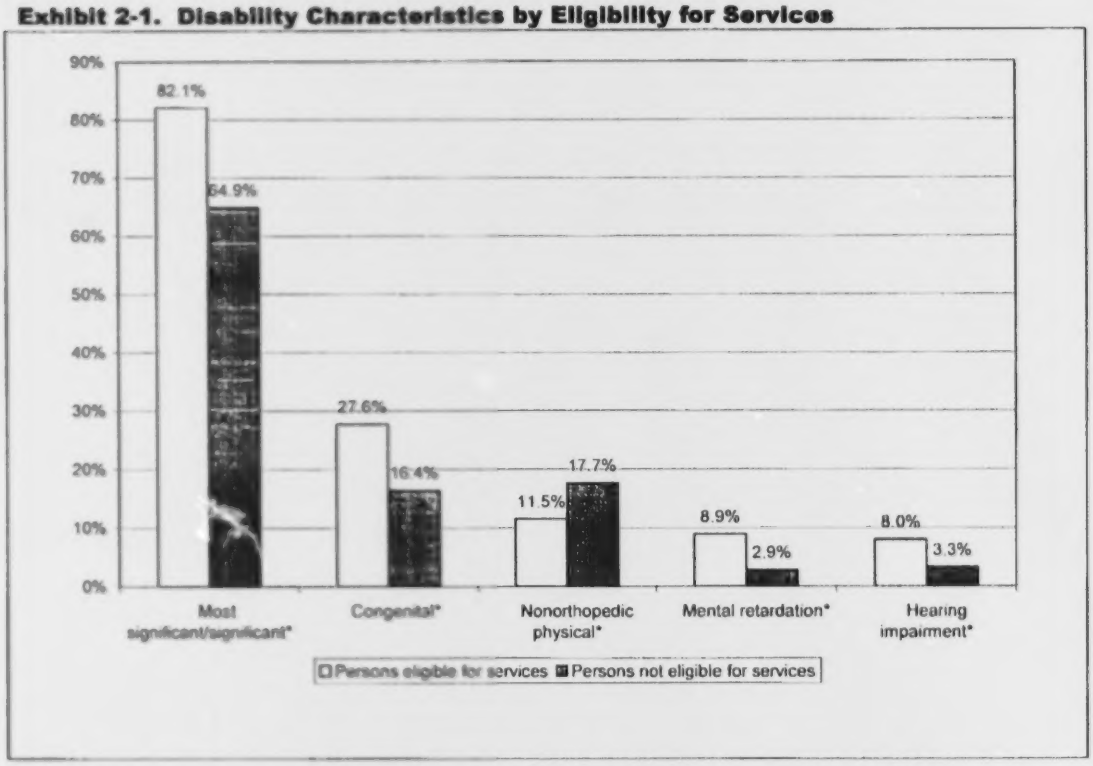


Table 2-2. Receipt of SSI/DI at Study Entry, Comparing Persons Eligible for Services with Those Determined Not Eligible

Type of benefit	Percentage	
	Persons eligible for services	Persons not eligible for services
Receiving financial assistance at study entry	47.8	43.7
Type of financial assistance, percentage of all consumers		
SSI/disabled*	16.8	10.9
Mean (median) months receiving	55.0 (36.0)	57.3 (60.0)
Mean (median) monthly amount	$405.07 ($435.00)	$437.73 ($458.00)
SSDI	12.0	10.9
Mean (median) months receiving	56.2 (35.0)	37.3 (17.0)
Mean (median) monthly amount	$566.16 ($525.00)	$591.33 ($490.00)
Primary source of support among persons receiving financial assistance		
Benefits	76.9	80.8
Family or friends	17.7	17.2
Self (earnings)*	5.4	2.1

*Significant difference ($p < .05$).

both groups, benefits were the primary source of support (77 percent of eligible applicants and 81 percent of persons not accepted for services, a nonsignificant difference.

Functional Status and Psychosocial Characteristics (Table A-3)

Based on standard items that gather information on activities of daily living and instrumental activities of daily living, RTI researchers developed composite measures of functioning in three areas: gross motor function; cognitive, or decision making, function; and personal care function (Schmidt-Davis, 2001).[5] Psychosocial characteristics for which the study developed composite measures include self-esteem, self-efficacy, and belief that events are controlled by powerful others. Overall, the two groups of applicants for VR services did not differ on measures of function, although persons determined not eligible for services had slightly lower gross motor function (nonsignificant difference). In terms of psychosocial characteristics, the ineligible group had lower self-esteem (a composite of 2.43 compared with 2.49) and a stronger belief that events were controlled by powerful others (1.72 compared with 1.66) (Table 2-3).

Table 2-3. Psychosocial Characteristics of Eligible and Ineligible Applicants

	Eligible	Not Eligible
Self-esteem*	HIGHER	Lower
Belief events are controlled by powerful others*	Lower	HIGHER

*Significant difference ($p < .05$).

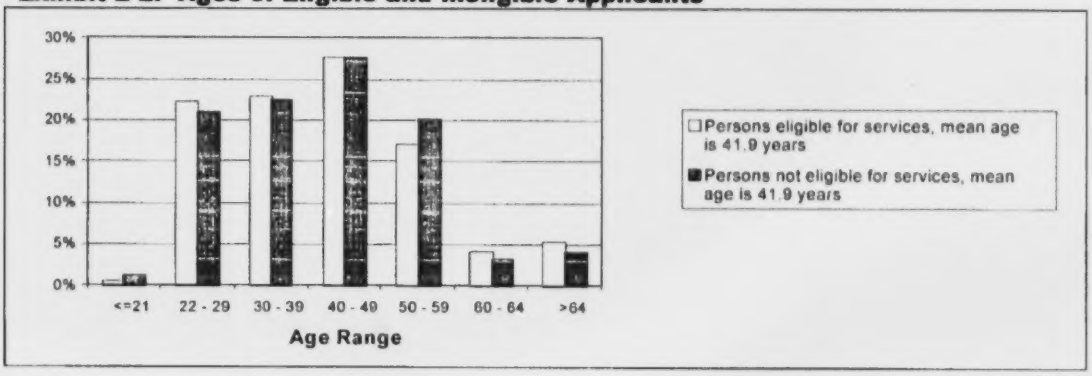
Demographic Characteristics (Table A-4)

Overall, the two groups were similar in terms of demographic characteristics. They were nearly identical in age, with mean age of both groups 41.9 years, and with about the same percentage under 30 (around one-fifth of each group) (Exhibit 2-2). A lower proportion of eligible applicants was male (51 versus 58 percent), although this difference was not statistically significant. More persons determined eligible for services had never been married than persons who were not eligible (47 versus 41 percent) (Exhibit 2-3). Persons determined eligible for services were more often white (84 versus 78 percent), although this difference was not

[5] Development of these measures follows prior work of gerontology researchers on composite measures of functioning among elderly persons; see Johnson and Wolinsky, 1993; Spector and Fleishman, 1998; and Thomas, Rockwood, and McDowell, 1998.

significant. Additionally, persons eligible for services were more often than the ineligible group to be Alaska Natives or American Indians, although this category represented a very small fraction of the applicant population (less than 1 percent).

Exhibit 2-2. Ages of Eligible and Ineligible Applicants



Educational Status (Table A-5)

More ineligible applicants for VR services had failed to complete a high school diploma or General Educational Development (GED) credential than was the case for persons eligible for services (31 compared with 25 percent) (Table 2-4); fewer ineligible applicants had received special education services in high school (14 versus 24 percent). Less than 10 percent of either group had completed at least a bachelor's degree. The two groups did not differ in terms of reading and mathematics achievement levels. In reading, the mean grade level was 8.4 in both groups, while mathematics mean grade level was 7.6. (These data were more frequently available in the files of relatively younger applicants.)

Exhibit 2-3. Marital Status of Eligible and Ineligible Applicants

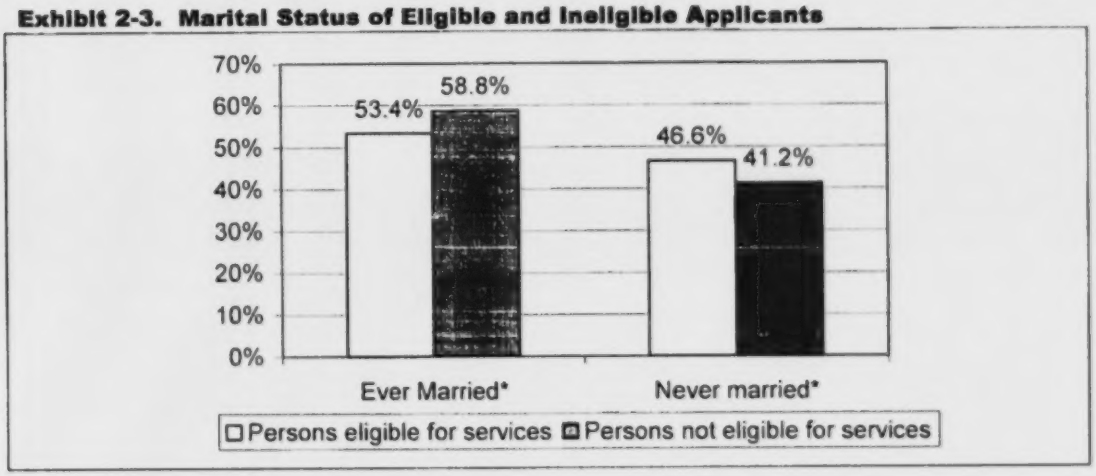


Table 2-4. Educational Characteristics of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Percentage	
	Persons eligible for services	Persons not eligible for services
Educational level at application		
Less than high school diploma/GED*	25.0	31.2
High school diploma/GED	62.4	58.9
Postsecondary degree	12.6	9.9
Total	100.0	100.0
Received special education services in high school*	24.4	14.3
Reading achievement level		
Mean	8.4	8.4
Median	9.0	9.0
Mathematics achievement level		
Mean	7.6	7.6
Median	7.0	8.0

*Significant difference ($p < .05$).

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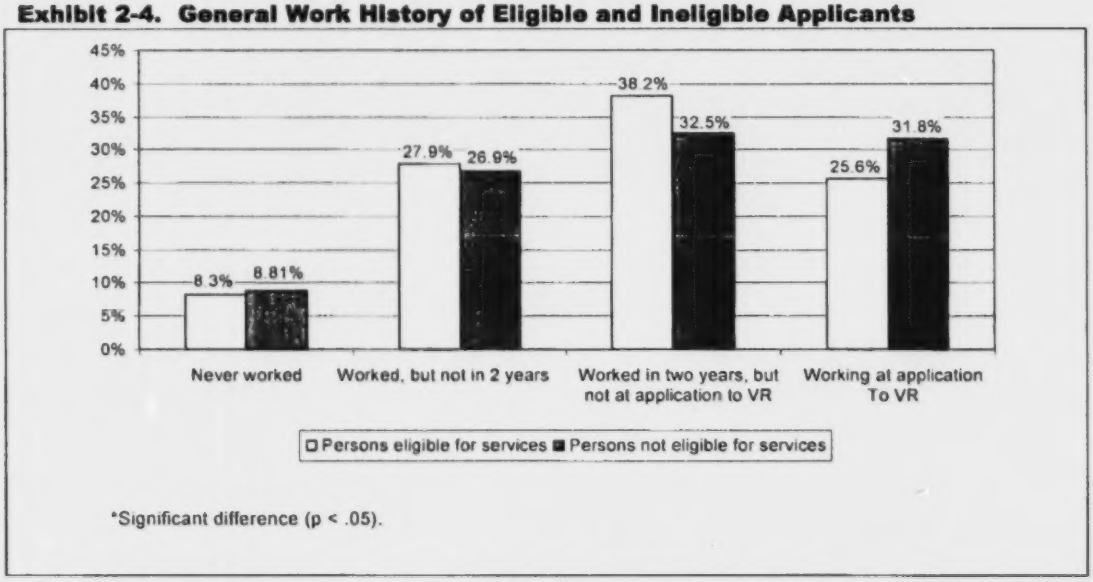
Preapplication Employment and Earnings (Tables A-6, A-7, A-8, A-9)

In general, the work history of both groups was similar, except for current employment status. Fewer eligible than ineligible applicants were working at application (26 percent versus 32 percent) (Exhibit 2-4). Less than 10 percent of all applicants who completed a work history interview reported never having worked at least two consecutive weeks. Over one-fourth reported having worked, but not in two years prior to their application for VR services. Among eligible applicants, 38 percent had worked in the prior two years but were not working at application; the comparable figure for ineligible applicants was 33 percent. This finding was not significant. Nearly two-thirds of both groups (64 percent of eligible and ineligible applicants) reported having held no more than two jobs in the past; average years on each job was 3.3 and 3.4 years, respectively (median of 2.0 and 1.0). As these data suggest, while some applicants reported extensive work experience, most of those who reported a work history had held relatively few jobs and had worked in those jobs for relatively short periods of time.

Exhibit 2-4. General Work History of Eligible and Ineligible Applicants



We conducted additional analyses on persons who were working at application for VR services since early study analyses have found a strong relationship between working at application and subsequent achievement of an employment outcome (Hayward, 1998). Overall, eligible persons who were working at the time they applied for VR services averaged more years in their current job than did other applicants. For example, eligible persons working at

application averaged 4.9 years (median 2.0) on their current job, while ineligible persons averaged 4.3 years (2.0). Average hours worked per week was about the same for each group: 32.2 (median 36.0) for eligible applicants and 31.4 (median 35.0) for ineligible persons. Hourly wages were essentially the same (mean $7.47 and $7.46; median $6.00 for both). Eligible applicants held jobs in clerical/sales occupations more often than the other group (22 versus 14 percent). They were employed in extended employment or supported employment positions more often, although the percentage working in such settings was low. For extended employment, the distributions were 5 percent of eligible persons and 1 percent of ineligible persons; comparable figures for supported employment were 2 and less than 1 percent, respectively.

We asked persons who were not working at application what their current labor force status was. For both groups, around two-fifths were looking for work (39 percent of eligible persons; 44 percent of ineligible persons); a substantial number were out of the labor market (not working and not looking for work); 31 percent of eligible applicants and 38 percent of ineligible persons reported this status, although the difference was not statistically significant. More eligible persons were students (18 versus 9 percent); about 7 percent of both groups were homemakers.

Persons not working at application but who had worked at some time in the past provided details regarding their most recent job in addition to information on their current labor force status. The two groups did not differ on average number of years in the job (3.5 and 3.6), hours worked per week (35.2 and 36.4), or hourly earnings ($7.36 and $7.43). More eligible persons reported extended employment as their most recent position, though the overall number of persons working in this setting was small (3 percent of all eligible applicants versus less than 1 percent of ineligible applicants).

Career-Related Interests and Motivations (Table A-10, A-11)

In order to assess career-related knowledge and interests, study participants responded to a series of items that fall into several categories: knowledge of specific jobs, knowledge of the requirements of different jobs, importance of the nonmonetary benefits of working, the importance of career status, and information-gathering skills related to employment. Persons

who were eligible for VR services were more knowledgeable regarding specific jobs in which they were interested than were members of the ineligible group (2.59 versus 2.48 on a 1 to 3 scale) (Table 2-5). Additionally, eligible persons possessed greater employment-related information-gathering skills than did those determined ineligible for services (2.46 versus 2.30). In terms of occupational focus of vocational goal (i.e., clerical/sales, processing, and the like), however, the groups were similar, with no significant differences observed.

Table 2-5. Career-Related Knowledge of Eligible and Ineligible Applicants

	Eligible	Not Eligible
Knowledge of specific jobs*	HIGHER	Lower
Information gathering skills*	HIGHER	Lower

*Significant difference ($p < .05$).

As part of a series of baseline interviews, study participants answered a series of questions regarding their motivation for seeking VR services. (Multiple responses to these items were possible.) Eligible and ineligible applicants offered similar motives for applying to VR, including their desire for help in getting or keeping a job (76 percent of eligible applicants and 75 percent of those determined ineligible), to obtain help for vocational training or college (75 and 72 percent, respectively), and at the suggestion of another agency (47 and 43 percent, respectively). About the same percentage of both groups indicated prior VR closures, although persons determined eligible for services had more prior closures, on average, than did persons who were not eligible (1.25 compared with 1.13).

Likelihood of Gaining Access to VR Services

The findings reported in previous sections of this chapter revealed a number of significant differences between eligible and ineligible applicants. Another way of characterizing these differences is to say that the variables on which the eligible and ineligible individuals differed are related to, or correlated with, eligibility. Table F-1 (Appendix F) is a correlation matrix that shows the variables related to eligibility for VR services. Because this analysis also demonstrates some degree of correlation among the variables themselves, we also conducted logistic regression analyses as described below. As an example of the intercorrelations among the variables shown in Table F-1, marital status (never having been married) is related to having a congenital versus acquired disability (0.37) and having mental retardation (0.24), while having a congenital disability is correlated with mental retardation (0.40). Receipt of SSI or SSDI and

receipt of SSI-disabled alone were negatively correlated with receipt of other forms of financial assistance (-0.28 and -0.21, respectively).

As noted above, our next analytic step in examining eligibility was to conduct logistic regression analyses to determine which variables, among those that were individually related to eligibility, were the strongest predictors of eligibility, given that these variables are potentially related to one another as well and thus have overlapping relationships with eligibility. Therefore, we looked at the following variables to determine which would predict eligibility status[6]:

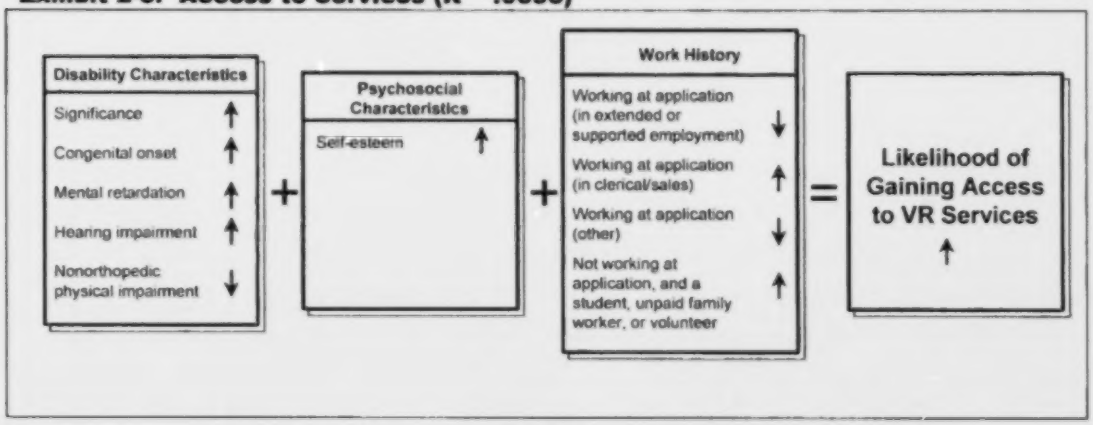
- *disability characteristics* (type, onset, and significance of disability);
- *receipt of financial assistance at application* (including SSI/SSDI);
- *psychosocial characteristics* (self-esteem and belief that events are controlled by powerful others);
- *educational characteristics* (level of education and receipt of special education services in high school);
- *work history* (working at application and if so, in what type of job);
- *career-related interests and motivations* (knowledge of specific jobs and information gathering skills); and
- *demographic characteristics* (marital status and race).

The logistic regression analyses revealed that variables among the disability characteristics, psychosocial characteristics, and work history categories contributed significantly and uniquely to prediction of eligibility for VR services. We present the odds ratios for these variables in Appendix G, Table G-1. We note that the R-square value for this model is only .0695 (perfect prediction would have a value of 1.0), and therefore we should be cautious about concluding that the applicants who were eligible and those who were not eligible are very different overall, at least on the measures we obtained. Exhibit 2-5 depicts the relationships of these variables to eligibility. Individuals whose disability was significant or most significant, those whose disability was congenital, and those whose disability was classified as either mental retardation or hearing impairment were more likely than other applicants to be eligible for VR services;

[6] In these regression analyses, we eventually excluded the variables for special education, knowledge of specific jobs, and information gathering skills because they contained missing values for a large number of cases.

those whose disability was nonorthopedic physical impairment were less likely than others to be eligible. In addition, applicants with higher self-esteem were more likely to be eligible. Finally, work history also predicted eligibility; those who were not working at application and were a student, unpaid family worker, or volunteer, were more likely than other applicants to be eligible, as were those who were working at application in clerical or sales positions. Persons working at application in supported or extended employment were less likely than other applicants to be accepted for VR services. The other variables we tested – receipt of financial assistance, educational characteristics, and demographic characteristics – were not significant; that is, they did not account for significant amounts of variance in eligibility beyond the variance accounted for in the variables shown in Exhibit 2-5.

Exhibit 2-5. Access to Services (R^2 ' .0695)



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Chapter 3

Receipt of VR Services

What characteristics of individuals with disabilities affect their receipt of VR services?

Not all persons who obtain access to VR services actually enter VR services. To examine similarities and differences between VR-eligible persons who did and did not actually obtain services, we analyzed the characteristics of persons who were eligible and entered services (persons who, at the end of their three-year study period, were either continuing to receive VR services, had exited VR having achieved an employment outcome, or had exited VR without having achieved an employment outcome) in comparison with characteristics of persons determined eligible for services but who left the program before they actually began receiving services.

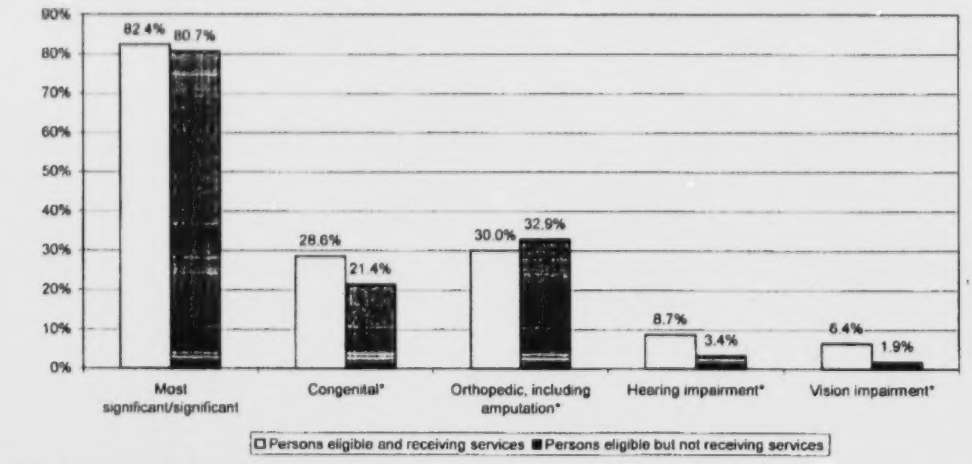
As with the question of access, this chapter provides findings for two groupsCpersons who received VR services and persons who were eligible for VR services but chose not to obtain those servicesCon a variety of disability, demographic, and other characteristics. Since members of both groups were eligible for VR services, the two groups can be expected to be similar on most dimensions. Those for which they differ help to explain some of the factors that may lead eligible persons to a decision not to undertake services through the VR system.

The tables that report findings on which this discussion is based appear in Appendix B of this report. As of the end of the study's data collection period, persons determined eligible for VR services who dropped out of the program prior to service initiation represent 12 percent of the VR population nationally. This percentage varies slightly from information available in RSA's data system since some study participants were still in applicant status at the end of the study's data collection period. Unless otherwise noted, all findings reported in this chapter are statistically significant.

Disability (Table B-1)

Persons who received VR services were nearly the same as those who dropped out in terms of significance of disability. Among persons entering services, 82 percent had a disability that was significant or most significant; 81 percent of those not receiving services had a significant/most significant disability. The two groups differed in onset of disability, however (Exhibit 3-1[dfb2]). Among persons receiving services, 29 percent had a congenital, versus acquired, disability. Only 21 percent of persons leaving VR before services had a congenital disability. The two groups also differed to some extent in type of disability. Fewer persons receiving services had an orthopedic disability than did eligible persons who left before services (30 versus 33 percent). Conversely, consumers of VR services more often had hearing impairments (9 versus 3 percent) or vision impairments (6 versus 2 percent) than did eligible persons who dropped out before services. Roughly the same percentages of each group had mental illness (20 percent for consumers, 24 percent for persons leaving before services), mental retardation (9 and 8 percent, respectively), or learning disabilities (8 percent each). About the same percentage of service recipients as dropouts had traumatic brain injuries (2 versus 3 percent).

Exhibit 3-1. Disability Characteristics by Receipt of Services



*Significant difference ($p < .05$).

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Receipt of SSI or SSDI (Table B-2)

According to information in consumers'[1] files, fewer persons participating in VR services were receiving financial assistance at study entry than were persons who dropped out before receiving services (47 percent compared to 57 percent) (Table 3-1[3]). Persons who elected not to enter VR services more often received SSI/disabled than did VR consumers (21 percent of versus 16 percent of all study participants); average monthly benefits were about the same ($395 for dropouts, $407 for consumers). Additionally, more dropouts were receiving SSDI benefits (16 versus 11 percent). However, persons receiving SSDI who entered VR services had been receiving such benefits longer than had dropouts (60 versus 34 months, on average; median 36 versus 24 months).

Table 3-1. Receipt of SSI/DI at Study Entry, Comparing Persons Eligible for and Receiving Services with Those Eligible for but Not Receiving Services

Type of benefit	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Receiving financial assistance at study entry*	**46.9**	**56.8**
Type of financial assistance, percentage of all consumers		
*SSI/disabled**	*16.2*	*20.9*
Mean (median) months receiving	*54.6 (36.0)*	*57.2 (36.0)*
Mean (median) monthly amount	*$406.94 ($435.00)*	*$395.25 ($434.00)*
*SSDI**	*11.4*	*15.8*
*Mean (median) months receiving**	*60.4 (36.0)*	*34.3 (24.0)*
Mean (median) monthly amount	*$563.63 ($526.00)*	*$578.75 ($506.00)*
Primary source of support among persons receiving financial assistance		
*Benefits**	*76.0*	*81.8*
Family or friends	*18.3*	*14.4*
Self (earnings)	*5.7*	*3.8*

*Significant difference ($p < .05$).

[1] The term "consumer" denotes a person who received VR services.

Among persons who had received some form of financial assistance (e.g., public benefits, private insurance, support from family or friends), fewer VR consumers than dropouts reported benefits as their primary source of support (76 versus 82 percent). About the same percentage of consumers and dropouts reported their own earnings as the primary source of support (6 versus 4 percent).

Functional Status and Selected Psychosocial Characteristics (Table B-3)

Persons who left VR prior to services were more limited in gross motor and personal care function than were consumers of VR services (Table 3-2[4]). The dropouts also had lower self-esteem. The two groups did not differ in terms of cognitive function, self-efficacy, or belief that powerful others control events.

Table 3-2. Functional and Psychosocial Characteristics of Persons Receiving Services and Persons Eligible but Not Receiving Services

	Eligible	
	Receiving Services	**Not Receiving Services**
Gross motor function*	HIGHER	Lower
Personal care function*	HIGHER	Lower
Self-esteem*	HIGHER	Lower

*Significant difference ($p < .05$).

Demographic Characteristics (Table B-4)

In general, the two groups were similar demographically. VR consumers were slightly older on average, though not significantly (42.0 compared with 41.1 years). Fewer VR consumers than dropouts were in the 50 to 59 age range (17 versus 20 percent, respectively), although more consumers were over 64 (6 versus 2 percent). Fewer VR consumers were male (51 compared with 55 percent), a nonsignificant difference. The groups were similar in marital status, although VR dropouts averaged more dependents than did VR consumers (mean of 1.0 versus 0.9). Persons who received services were about the same as eligible persons who did not enter services in terms of race/ethnicity.

Educational Status and Achievement (Table B-5)

VR consumers and persons leaving VR before services did not differ significantly on any of the available measures of educational status or achievement (Table 3-3)[5]. About the same percentages had less than a high school education (25 versus 28 percent); each group had received special education services at about the same rate (25 percent for consumers and 24 percent for dropouts). Both groups had about the same average grade level achievement in reading (8.4 for consumers and 8.3 for dropouts) and mathematics (7.7 and 7.4).

Table 3-3. Educational Characteristics of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible for but Not Receiving Services

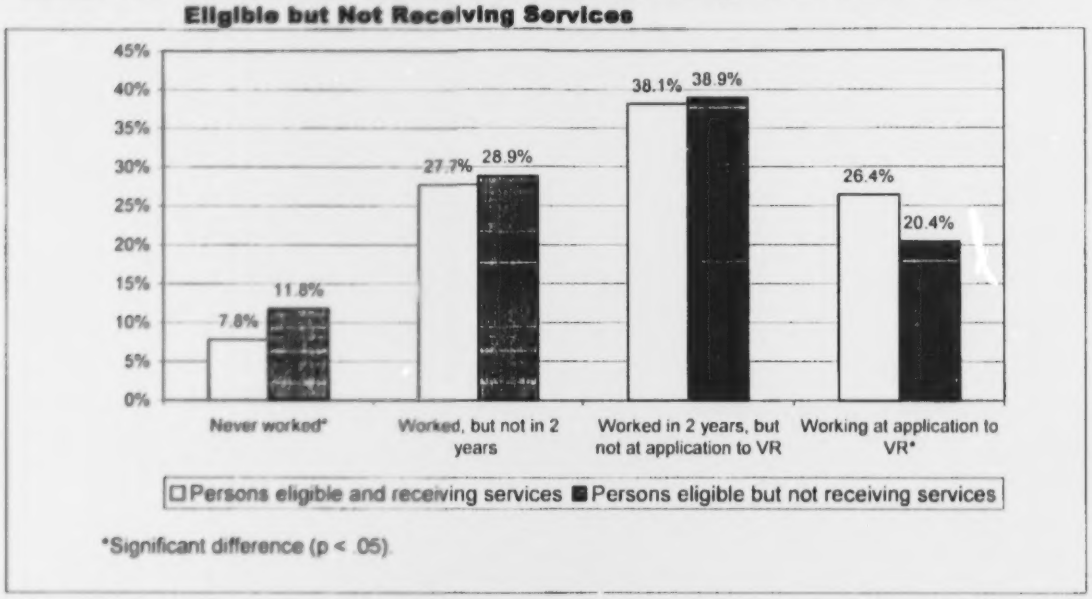
Characteristic	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Educational level at application		
Less than high school diploma/GED	24.5	28.2
High school diploma/GED	62.8	59.6
Postsecondary degree	12.7	12.2
Total	100.0	100.0
Received special education services in high school	24.5	23.9
Reading achievement level		
Mean	8.4	8.3
Median	9.0	8.7
Mathematics achievement level		
Mean	7.7	7.4
Median	7.0	7.0

*Significant difference ($p < .05$).

Employment and Earnings History (Tables B-6, B-7, B-8, B-9)

As shown in Exhibit 3-2[6], more persons who were eligible for but did not receive VR services reported that they had never worked for two consecutive weeks than was the case among VR consumers (12 versus 8 percent). Fewer were working at application (20 percent of dropouts compared with 26 percent of VR consumers). The two groups were similar in terms of persons who had worked but not in the prior 2 years (29 percent for dropouts; 28 percent for consumers) and persons not working at application but having worked in the past (39 and 38 percent, respectively). Additionally, the average years in each job was nearly the same: 3.3 years for dropouts and 3.5 years for VR consumers.

Exhibit 3-2. General Work History of Persons Receiving Services and Persons Eligible but Not Receiving Services



In addition to information on the general work history of all study participants, we collected work-related details from persons who reported that they were working at application for VR services (26 percent of consumers and 20 percent of dropouts). Characteristics of the employment situation of the two groups were similar. For example, both groups worked about the same number of hours per week in the job held at application for VR services (32.2 for consumers, 31.6 for dropouts), and although VR consumers earned more per hour in that job ($7.53 versus $6.85), that difference was not significant. The two groups were also similar in percentage whose job was in the competitive labor market (89 percent for VR consumers and 92 percent for others). Fewer consumers were working in benchwork occupations than were dropouts, however (4 versus 7 percent).

Among persons not working at application, VR consumers more often reported that they were students (20 percent versus 9 percent), while eligible persons who did not enter VR services were more often volunteer workers, although the percentage of individuals reporting this activity was small (2 percent of dropouts and < 1 percent of VR consumers). Similar percentages of both groups reported that they were looking for work (39 percent of VR consumers; 40 percent of the other group). Fewer VR consumers reported being out of the labor

force entirely (not working and not looking for work) than did eligible persons who did not enter services (30 versus 39 percent), but the difference was not significant.

Persons in each of the groups who were not working at application but described their most recent job provided similar information: number of years in job, hours worked, hourly wages, type of job, and type of occupation of most recent job. The two groups were similar on these measures, and nearly identical on some of them. For example, hourly wage of most recent job was $7.39 for VR consumers and $7.40 for persons not receiving services. Percentage of recent jobs in the competitive labor market was 90 percent for VR consumers and 91 percent for dropouts. More VR consumers were unpaid family workers than were dropouts, although the number of persons in this category was very low for each group. Finally, more VR consumers reported that their most recent job was in benchwork occupations (5 percent versus 3 percent for persons who left without receiving VR services).

Career-Related Interests and Motivations, Including Vocational Goals (Tables B-10, B-11)

As noted earlier, study participants completed interviews that examined career-related interests and knowledge as part of the baseline data collection. These items examined knowledge of specific jobs and of different kinds of jobs, perspectives on nonmonetary benefits of jobs, view of career status and advancement, and employment-related information-gathering skills. Persons who were eligible for and received VR services had more knowledge of the nature and requirements of specific jobs than did eligible persons who chose not to enter VR services (Table 3-4[7]). Similarly, VR consumers had greater skills at obtaining information regarding employment. The two groups were similar on the other dimensions of career interest and knowledge.

The two groups did not differ in regard to their occupational fields of choice, as reflected in their vocational goals. About one-third of each group (35 percent of VR consumers and 32 percent of dropouts) selected a goal in the professional, managerial, or technical occupations,

and essentially the same percentages of both groups listed goals in clerical/sales occupations (18 percent in each group) and in service occupations (21 and 22 percent, respectively).

Table 3-4. Career-Related Knowledge of Persons Receiving Services and Persons Eligible but Not Receiving Services

	Receiving Services	Not Receiving Services
Knowledge of specific jobs*	HIGHER	Lower
Information gathering skills*	HIGHER	Lower

*Significant difference ($p < .05$).

In terms of motivation for seeking VR services, more VR consumers indicated an intent to obtain an assistive technology device or service than did persons who were eligible but exited VR without obtaining services (17 versus 10 percent). Otherwise, the two groups were similar in the motivation they offered for seeking services, with around three-quarters of each group mentioning the desire to obtain help to get or keep a job and the intent to obtain help for vocational training or college. About one-sixth of both groups had prior VR closures, according to their case files.

Likelihood to Receive VR Services

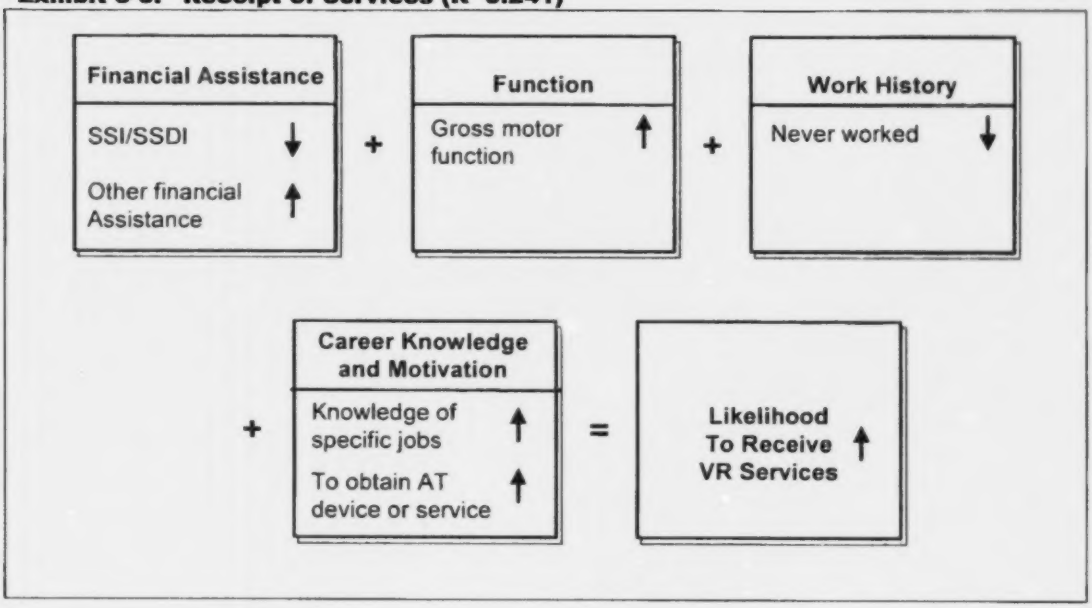
The findings reported in this chapter revealed some statistically significant differences between persons who received VR services and persons who were eligible for VR services but chose not to obtain those services. To examine these differences, we conducted further analyses to determine whether the variables on which the two groups differed are related to, or correlated with, receipt of VR services. We included in the analysis the variables for which differences were statistically significant. As shown in the correlation matrix in Table F-2 (Appendix F), a number of the variables were individually correlated with receipt of VR services. Because this analysis also demonstrates some degree of correlation among the variables themselves, we conducted logistic regression analyses as described below. As an example of the intercorrelation among the variables, gross motor function is related to cognitive function (0.30) and to personal care function (0.48), which is also related to cognitive function (0.32). Gross motor function is negatively related to having an orthopedic disability (-0.42), which is also negatively related to personal care function (-0.23). Job-related information gathering skills are related to knowledge of specific jobs (0.44) as well as to cognitive function/self-esteem (0.29). Having a hearing impairment is related to desire to obtain assistive technology devices or services as the motive for applying for VR services (0.36).

As noted above, our next analytic step in exploring receipt of services was to conduct logistic regression analyses to investigate the unique contributions of the consumer characteristics in predicting receipt of services. Again, we looked at which of the following variables would most strongly predict receipt of services:

- *disability characteristics* (type and onset of disability);
- *receipt of financial assistance at application* (including SSI/SSDI);
- *functional status and psychosocial characteristics* (gross motor function, cognitive function, personal care function, and self-esteem);
- *work history* (working at application and never having worked for two consecutive weeks);
- *career-related interests and motivations* (knowledge of specific jobs, information gathering skills, and reason for applying to VR); and
- *demographic characteristics* (number of dependents).

As shown in Exhibit 3-3[8], the logistic regression analyses revealed that receiving SSI or SSDI reduced the likelihood that an eligible individual would enter VR services, although receipt of other forms of financial assistance (e.g., support from family or friends, general assistance, private insurance) increased the odds of entering VR services. Higher gross motor functioning was associated with receiving services, while having no work history (i.e., never having worked at a job two consecutive weeks) decreased the likelihood of receiving VR services. In terms of career-related knowledge and motivations, greater knowledge of specific jobs, greater job-related information gathering skills, and the desire to obtain assistive technology devices or services increased the odds of receiving VR services. We present the odds ratios for these variables in Appendix G, Table G-2. It is important to note, however, that the R-square value for this model is quite low, suggesting that despite the factors that predict receipt of services, the reader should be cautious about concluding that the two groups—eligible persons who entered VR services and eligible persons who chose not to enter VR services—are very different overall, at least on the variables the study measured.

Exhibit 3-3. Receipt of Services (R^2=0.241)



Chapter 4

Achievement of an Employment Outcome

What characteristics of individuals with disabilities affect the outcomes of their VR services?

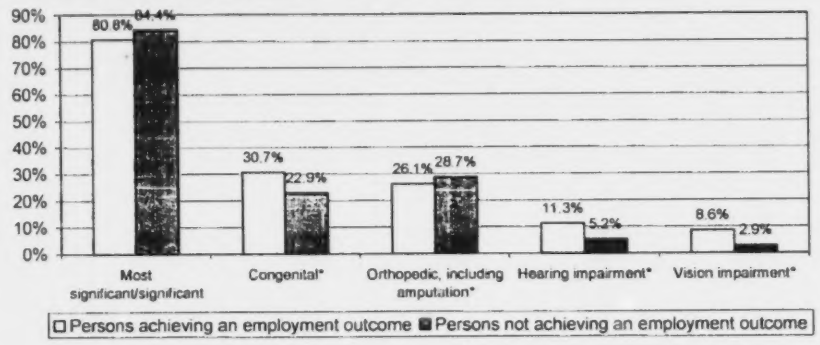
At the end of the study's data collection period, 17 percent of the study population were continuing to receive services, 45 percent had achieved an employment outcome, and 21 percent had exited VR after services without having achieved an employment outcome. Following RSA's criteria for determining the rate of employment outcomes, we found that the percentage of the study population who achieved an employment outcome was 69 percent. This percentage is somewhat higher than the rate reported through the RSA data system, which is based only on cases closed during a fiscal year rather than on a cohort of persons as was the design for the VR longitudinal study. Since over one-sixth of the study population was continuing to receive services at the end of the study's data collection period, we believe that the two rehabilitation rates are comparable.

In this chapter, we summarize key findings regarding similarities and differences in characteristics between two groups of VR consumers: persons who achieved an employment outcome, either competitive or noncompetitive employment, as a result of VR services and those who exited VR services without having achieved an employment outcome. As with other chapters in this report, characteristics examined in these analyses include disability-related characteristics, including receipt of public benefits and functional status; demographic and educational characteristics; work history; and career-related interests. Examination of similarities and differences on these dimensions between the two groups may provide an understanding of what leads the latter group not to enter the labor force despite having invested time in employment-related services available through the VR program, while other consumers, with largely similar characteristics, persevere to employment. The tables that report findings on which this discussion is based appear in Appendix C of this report. Unless otherwise noted, all findings reported in this chapter are statistically significant.

Disability (Table C-1)

More persons who achieved an employment outcome as a result of VR services had hearing impairments (11 versus 5 percent) or vision impairments (9 versus 3 percent) than did persons who left VR without gaining employment (Exhibit 4-1[dfb9]). Fewer successful consumers had an orthopedic disability, however (26 versus 29 percent of persons exiting without employment). The two groups were very similar in terms of significance of disability; over four-fifths of each group had a significant or most significant disability. They differed on onset of disability; 31 percent of successful VR consumers had a congenital disability, compared with 23 percent of persons exiting the program without an employment outcome.

Exhibit 4-1. Disability Characteristics by Employment Outcome



*Significant difference ($p < .05$).

Receipt of SSI or SSDI (Table C-2)

Fewer consumers who achieved an employment outcome were receiving financial assistance at study entry than were consumers who exited VR without such an outcome (44 percent versus 55 percent) (Table 4-1[10]). In addition, consumers with an employment outcome less frequently received SSI/disabled (14 versus 22 percent) or SSDI (10 versus

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Table 4-1. Receipt of SSI/DI at Study Entry, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Type of benefit	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
Receiving financial assistance at study entry*	43.9	55.1
Type of financial assistance, percentage of all consumers		
SSI/disabled*	13.7	22.3
Mean (median) months receiving	54.7 (36.0)	54.9 (48.0)
Mean (median) monthly amount	$395.72 ($422.00)	$417.21 ($446.00)
SSDI*	9.7	14.9
Mean (median) months receiving*	61.5 (36.0)	59.2 (48.0)
Mean (median) monthly amount	$540.64 ($520.00)	$586.01 ($545.00)
Primary source of support among persons receiving financial assistance		
Benefits*	71.8	82.2
Family or friends*	20.4	14.7
Self (earnings)*	7.8	3.1

*Significant difference ($p < .05$).

15 percent). Among those who were receiving SSDI, consumers with an employment outcome had been receiving this benefit for fewer months (mean 62 versus 59; median 36 versus 48). Fewer persons with an employment outcome reported benefits as their primary source of support at entry than was the case for persons exiting VR without an employment outcome. Comparable percentages were 72 percent for consumers with employment outcome and 82 percent for those without such an outcome. More consumers with than without an employment outcome had their own earnings or family/friends as their primary source of support (8 versus 3 percent for earnings and 20 versus 15 percent for friends or family). Finally, fewer consumers who were receiving SSI/DI and who achieved an employment outcome reported never having worked two consecutive weeks prior to VR entry (8 versus 11 percent).

Functional Status and Selected Psychosocial Characteristics (Table C-3)

Persons achieving an employment outcome had higher gross motor and personal care functioning than did those who failed to achieve such an outcome (Table 4-2[11]). They also had higher self-esteem. The two groups did not differ significantly on either self-efficacy or belief that powerful others control events.

Table 4-2. Functional and Psychosocial Characteristics of Persons Achieving an Employment Outcome and Persons Not Achieving an Employment Outcome

	Achieving an Employment Outcome	Not Achieving an Employment Outcome
Gross motor function*	HIGHER	Lower
Personal care function*	HIGHER	Lower
Self-esteem*	HIGHER	Lower

*Significant difference ($p < .05$).

Demographic Characteristics (Table C-4)

Slightly over half of both groups were male (52 percent for successful and 51 percent for unsuccessful consumers), and they were similar ages, with average age of consumers with an employment outcome 43.6 years (median 42.0), and 41.9 years (median 42.0) for those who exited VR without an employment outcome. Although more consumers with an employment outcome were white (86 compared with 80 percent), this difference was nonsignificant. The groups were similar in marital status.

Educational Status and Achievement (Table C-5)

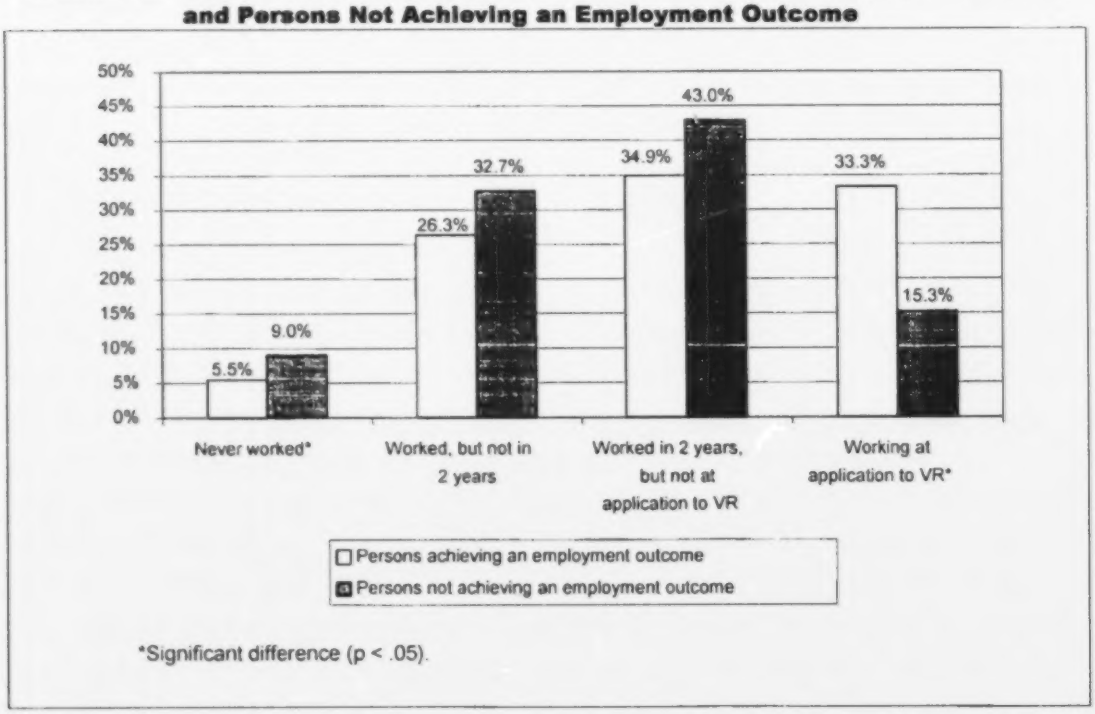
There were no significant differences between the two groups on the educational variables. Only slightly more persons who obtained an employment outcome completed high school or a GED than did those who left VR without an employment outcome (64 compared with 61 percent), although this difference was not significant. Fewer successful consumers had dropped out of high school also (22 and 38 percent, respectively), although again this difference was not significant. For both groups, fewer than 10 percent had earned at least a bachelor's degree (6 percent in each group). Similarly, about the same percentage had received special education services in high school (26 percent of consumers with an employment outcome and 24 percent of those exiting VR without employment). The two groups were also essentially the

same with regard to grade level achievement in reading and mathematics. (Chapter 5 examines the differences in these characteristics between consumers who achieved competitive employment and those whose employment outcome was noncompetitive.)

Employment and Earnings History (Tables C-6, C-7, C-8, C-9)

Fewer consumers with an employment outcome than those without such an outcome reported that they had never worked two consecutive weeks (6 versus 9 percent) (Exhibit 4-2). [12]Conversely, more successful consumers were working at application for VR services than were consumers exiting without an employment outcome (33 and 15 percent, respectively). The two groups did not differ on number of jobs they had held or on average number of years in those jobs.

Exhibit 4-2. General Work History of Persons Achieving an Employment Outcome and Persons Not Achieving an Employment Outcome



Among consumers who were working at application (one-third of those with an employment outcome and one-sixth of those without that outcome), successful consumers had spent more years in that job (5.2 versus 4.6). They worked slightly more hours per week (33.0 versus 32.1) and made higher wages ($7.79 and $7.38), although neither of these findings was

significant. For both groups, most jobs were in the competitive labor market (90 and 91 percent); persons with a subsequent employment outcome more often were working in supported employment at application (2 versus 1 percent), although the percentage of both groups in this type of employment was very low. The two groups were similar in terms of type of occupation of the jobs they held at application for VR services.

Among persons who were not working at application, fewer consumers who subsequently achieved an employment outcome reported that they were not looking for work (i.e., were not in the labor force); the percentages were 28 percent of persons with, and 32 percent of persons without an employment outcome. The same percentage of both groups reported that they were students at the time of application for VR services (16 percent each for those who achieved and did not achieve an employment outcome).

Persons not working at application provided details of their most recent job prior to application for VR services; the two groups were similar in number of years in most recent job (3.7 and 3.6 years, respectively) and hours worked per week (35.2 for persons with an employment outcome; 35.3 for those without such an outcome). Both groups reported that their most recent job was in the competitive labor market (90 percent of successful consumers; 91 percent of those without an employment outcome).

Career-Related Interests and Motivations, Including Vocational Goals (Tables C-10, C-11)

Persons who obtained an employment outcome had greater knowledge of specific jobs and greater employment-related information-gathering skills than did consumers who exited VR without an employment outcome (Table 4-3[13]). The two groups were about the same in terms of knowledge of different types of jobs, perspectives on the nonmonetary benefits of jobs, and attitudes toward career status and advancement. They did not differ on the occupational fields of their initial vocational goals, with more than a third of each group listing a goal in professional, managerial, or technical fields (35 and 36 percent, respectively) and one-fifth listing a goal in service occupations (21 and 22 percent).

Table 4-3. Career-Related Knowledge of Persons Achieving an Employment Outcome and Persons Not Achieving an Employment Outcome

	Achieving an Employment Outcome	Not Achieving an Employment Outcome
Knowledge of specific jobs*	HIGHER	Lower
Information gathering skills*	HIGHER	Lower

*Significant difference ($p < .05$).

More persons who subsequently achieved an employment outcome described the desire to obtain an assistive device or service as a motive for seeking VR services (22 percent compared with 14 percent of consumers exiting the program without employment). Fewer successful consumers mentioned their desire to obtain help for vocational training or college than did eligible persons who exited VR without an employment outcome (64 versus 79 percent). Other frequent reasons, on which the two groups did not differ much, included help in getting or keeping a job (77 percent of successful consumers; 81 percent of unsuccessful consumers), and recommendation from another agency (45 and 47 percent, respectively). About one-sixth of both groups had prior VR closures; the average number of prior closures was 1.26 for consumers with an employment outcome and 1.21 for consumers without such an outcome.

Likelihood of Achieving an Employment Outcome

The findings reported in this chapter revealed a number of significant differences in characteristics between persons who achieved an employment outcome and persons who exited VR without having achieved an employment outcome. To examine the individual relationships between these characteristics and achievement of an employment outcome, we conducted correlation analysis using all the variables on which the two groups differed significantly. Table F-3 (Appendix F) is a correlation matrix that reports the results of this analysis. As noted in the table, a number of variables that relate to achievement of an employment outcome as a result of VR services also relate to each other. For example, being older is positively related to having a vision impairment (0.36) but negatively related to having a congenital versus acquired disability (-0.35). Vision impairment is also negatively related to cognitive function (-0.47).

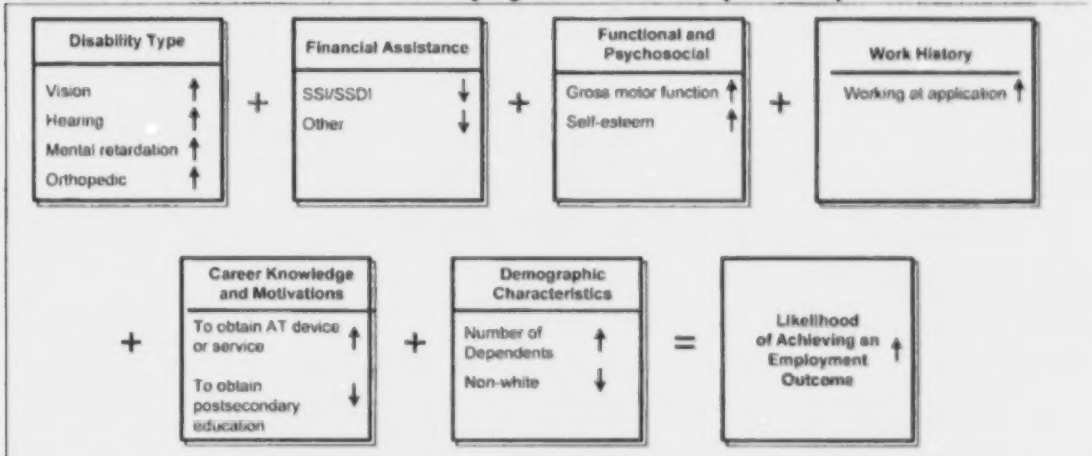
We also conducted logistic regression analyses to investigate the unique contributions of the consumer characteristics in predicting the achievement of an employment outcome. We looked at the following consumer characteristics to determine which would predict achieving an employment outcome:

- *disability characteristics* (type and onset of disability);
- *receipt of financial assistance at application* (including SSI/SSDI);
- *functional status and psychosocial characteristics* (gross motor function, cognitive function, personal care function, and self-esteem);
- *work history* (working at application and never having worked for two consecutive weeks);
- *career-related interests and motivations* (knowledge of specific jobs, information gathering skills, and reason for applying to VR); and
- *demographic characteristics* (number of dependents and race).

As shown in Exhibit 4-3[14], the logistic regression analyses revealed a number of characteristics that either increased or decreased the likelihood that a VR consumer would achieve an employment outcome. We present the odds ratios for these variables in Appendix G, Table G-3. In terms of type of disability, individuals with vision impairments, hearing impairments, mental retardation, or orthopedic impairments were more likely than consumers with other disabilities to achieve an employment outcome at closure. Receipt of SSI, SSDI, or other forms of financial assistance decreased the likelihood of achieving an employment outcome. Higher gross motor function and higher self-esteem were associated with achieving an employment outcome, as was working at application for VR services. In terms of career knowledge and motivation to obtain VR services, the desire to obtain assistive technology devices or services increased the odds of achieving an employment outcome, while the desire to obtain help in attending vocational training or college decreased the odds. The latter finding relates in part to the percentage of persons achieving an employment outcome who enter extended or supported employment as an employment outcome, perhaps because of the efficacy of the place-train model in assisting individuals with significant or most significant disabilities

to become acclimated to the labor force. Finally, having more dependents increased the odds, while being nonwhite decreased the odds, of achieving an employment outcome. We note that this prediction model achieves a level of prediction that is strong, accounting for nearly 15 percent of the variance in outcomes.

Exhibit 4-3. Achievement of an Employment Outcome (R^2=.1448)



Chapter 5

Achievement of a Competitive Employment Outcome

What characteristics of individuals with disabilities affect their likelihood to achieve a competitive employment outcome?

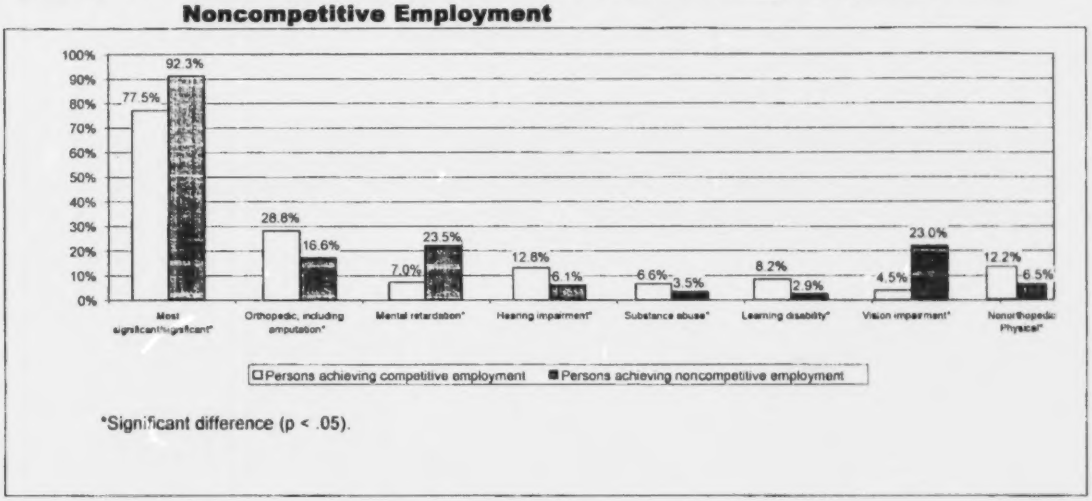
In addition to the VR program's performance in terms of assisting individuals with disabilities to obtain an employment outcome overall, decision makers are interested in the extent to which employment outcomes that VR consumers obtain assist them in achieving economic stability to the maximum extent possible. To examine this question, we compared the characteristics of persons whose employment outcome was in the competitive labor market with those of persons whose employment outcome was not competitive.[1] Of persons achieving an employment outcome as a result of VR services, 77.9 percent were working at jobs in the competitive labor market; 22.1 percent held noncompetitive jobs. As with prior chapters, we compare the two groups in terms of disability, functional status, receipt of benefits, demographic and educational characteristics, work history, and career-related knowledge and interests. Unless otherwise noted in the text, all differences are statistically significant. Tables containing data on which this discussion is based appear in Appendix D.

Disability (Table D-1)

VR consumers whose employment outcome was in the competitive labor market more often had orthopedic disabilities (29 versus 17 percent), nonorthopedic physical disabilities (12 versus 7 percent), hearing impairments (13 compared with 6 percent), learning disabilities (8 compared with 3 percent), or substance abuse disabilities (7 versus 4 percent) (Exhibit 5-1). Conversely, those with a noncompetitive job more often had mental retardation (24 percent compared with 7 percent of persons working in a competitive job) or vision impairments (23 versus 5 percent). The two groups differed on significance of disability as well: persons with noncompetitive jobs were more often classified as having a significant or most significant disability (92 versus 78 percent). The two groups were similar in onset of disability: for

[1] For purposes of the study, jobs in the "general labor market" (including self-employment) available to all workers were classified as competitive. "Noncompetitive" included persons in the following categories: extended employment, supported employment, homemaker, unpaid family worker.

Exhibit 5.1. Disability Characteristics of Persons Achieving Competitive and Noncompetitive Employment



*Significant difference ($p < .05$).

persons with competitive jobs, 29 percent of disabilities were congenital, compared with 37 percent of persons working in a noncompetitive job.

Receipt of SSI or SSDI (Table D-2)

As shown in Table 5-1, fewer persons in competitive jobs were receiving financial assistance at study entry than were noncompetitively employed consumers (39 percent versus 62 percent). Fewer competitively employed consumers had been receiving either SSI/disabled (10 versus 27 percent) or SSDI (9 versus 14 percent). Additionally, case records indicated that among consumers who entered competitive employment, fewer relied on benefits as their primary means of support at entry (68 compared with 80 percent of persons who became employed in a noncompetitive setting), while more competitively employed consumers had been relying on their own earnings at study entry (10 compared with 3 percent).

Functional Status and Selected Psychosocial Characteristics (Table D-3)

VR consumers who obtained employment in the competitive labor market had fewer limitations in two of the three areas of function: gross motor and cognitive (Table 5-2[15]). The two groups did not differ, however, in psychosocial characteristics (self-esteem, self-efficacy, and belief that powerful others control events).

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Table 5-1. Receipt of SSI/DI at Study Entry, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Type of benefit	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Receiving financial assistance at study entry*	38.7	62.4
Type of financial assistance, percentage of all consumers		
SSI/disabled*	10.0	27.3
Mean (median) months receiving	53.0 (36.0)	56.9 (36.0)
Mean (median) monthly amount	$396.56 ($422.07)	$394.62 ($423.00)
SSDI*	8.5	14.3
Mean (median) months receiving	59.8 (35.0)	64.9 (36.0)
Mean (median) monthly amount	$554.23 ($529.00)	$510.55 ($467.00)
Primary source of support among persons receiving financial assistance		
Benefits*	67.4	80.1
Family or friends	22.0	17.3
Self (earnings)*	10.2	2.6

*Significant difference ($p < .05$).

Table 5-2. Functional Characteristics of Persons Achieving Competitive and Noncompetitive Employment

	Achieving Competitive Employment	Achieving Noncompetitive Employment
Gross motor*	HIGHER	Lower
Cognitive*	HIGHER	Lower
Personal care	HIGHER	Lower

*Significant difference ($p < .05$).

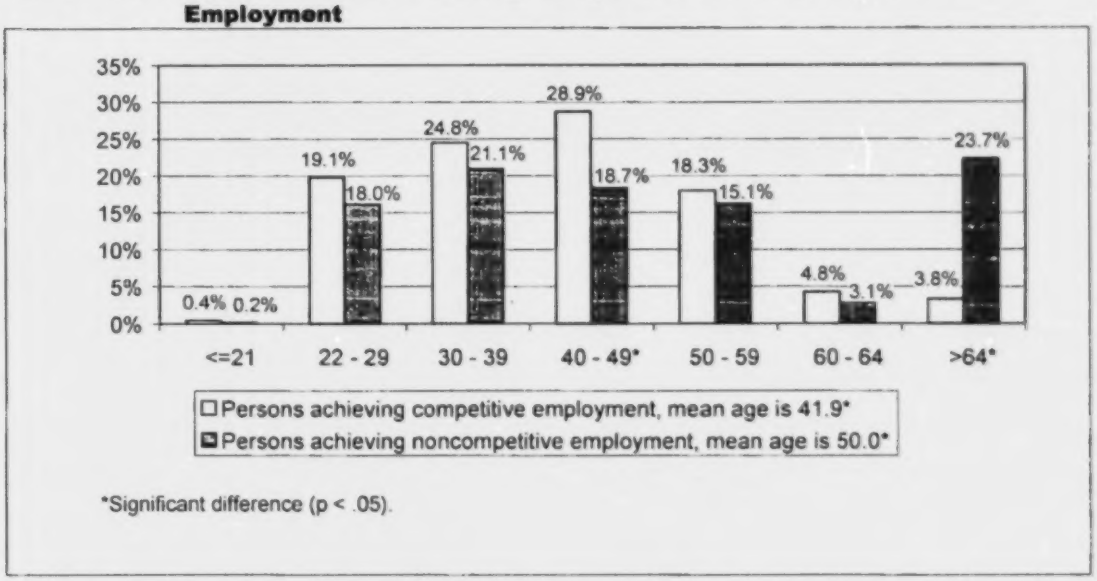
Demographic Characteristics (Table D-4)

The two groups of consumers did not differ significantly in terms of gender, although more consumers who obtained competitive employment were male than were those entering noncompetitive employment (53 percent compared with 47 percent). As shown in Exhibit 5-2, competitively employed consumers were younger (average age of 41.9 years compared with 50.0 years), a difference explained in part by the substantially larger percentage of noncompetitively employed consumers who were over 64 (24 versus 4 percent).[2] The two groups were about the same in terms of race/ethnicity, with competitively employed consumers slightly more often African-American (13 versus 12 percent) or Hispanic (11 versus 8 percent).

[2] Nearly all (89 percent) consumers over 64 who achieved a noncompetitive employment outcome became homemakers.

Noncompetitively employed persons were more often widowed (15 versus 2 percent) and had fewer dependents (means of 0.6 versus 1.0, respectively).

Exhibit 5-2. Ages of Persons Achieving Competitive and Noncompetitive Employment



*Significant difference ($p < .05$).

Educational Status and Achievement (Table D-5)

The two groups were essentially the same in terms of high school/GED completion (64 percent among competitively employed consumers and 65 percent among others) (Table 5-3). Fewer persons who entered competitive employment had received special education services in high school (23 compared with 37 percent). They had higher grade level achievement in reading (mean 8.5 versus 6.5; median 9.0 versus 5.5) and mathematics (mean 7.9 versus 6.2; median 7.3 versus 5.0) than did consumers who entered noncompetitive jobs.

Table 5-3. Educational Characteristics of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Educational level at application		
Less than high school diploma/GED	22.0	23.6
High school/GED	63.7	65.2
Postsecondary degree	14.3	12.2
Total	100.0	100.0
Received special education services in high school*	22.9	36.7
Reading achievement level		
Mean*	8.5	6.5
Median	9.0	5.5
Mathematics achievement level		
Mean*	7.9	6.2
Median	7.3	5.0

*Significant difference ($p < .05$).

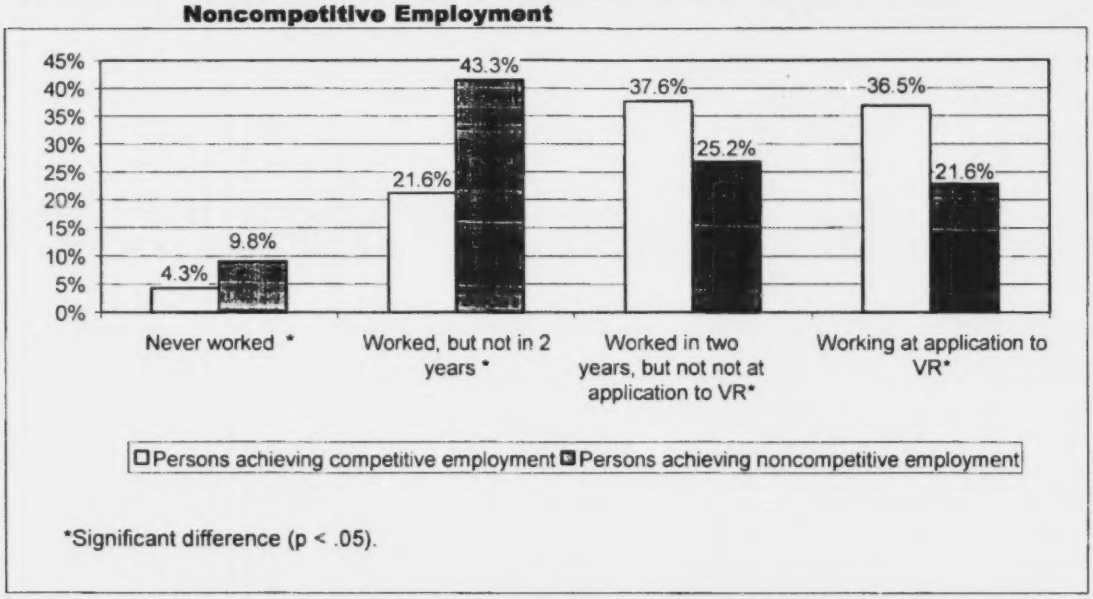
Work History and Preservice Earnings (Tables D-6, D-7, D-8, D-9)

In terms of general work history, during an interview, over twice as many noncompetitively employed persons reported never having worked for two consecutive weeks prior to application as did persons in competitive jobs (10 compared with 4 percent) (Exhibit 5-3[16]).

More noncompetitively employed persons had also not worked in the two years prior to applying for VR services, although they had worked at some time in the past (43 versus 22 percent). More competitively employed persons who were unemployed at application to VR had worked in the two years prior to VR entry (38 compared with 25 percent), and more frequently reported that they were working at the time of application to VR (37 versus 22 percent).

Noncompetitively employed persons reported having held fewer jobs than those with competitive jobs. Half had held only one job, compared with about a third of persons with competitive jobs (52 versus 37 percent), while the latter more often had held three (17

Exhibit 5-3. General Work History of Persons Achieving Competitive and Noncompetitive Employment



versus 6 percent) or four (6 versus 4) jobs in the past. Interestingly, persons in noncompetitive employment reported more average years in each job they had held than did persons with competitive jobs (4.1 versus 3.6 years).

Among persons who were working at the time of application for VR services, the two groups were about the same in terms of number of years they had held their current job (5.2 and 5.1 years, respectively), although those who subsequently entered competitive jobs had worked more hours per week (33.6 versus 29.0) and earned higher hourly wages than did consumers who later became noncompetitively employed (mean $8.12 versus $5.43; median $6.30 versus $4.50). The job held at application was more often in the competitive labor market among consumers who later retained or obtained a competitive job (95 versus 59 percent). Consumers who exited VR with noncompetitive employment more often worked at application in extended employment (22 versus 2 percent), or supported employment (14 versus 1 percent). They more frequently had worked in miscellaneous occupations as well (21 versus 8 percent).

We explored the labor force status of persons who were not working at application to VR. About the same percentage of persons obtaining competitive as noncompetitive employment

reported that they were looking for work (44 versus 43 percent). More persons obtaining competitive employment were students at application to VR (17 compared with 12 percent), while fewer who exited with competitive employment reported that they were out of the labor market (not looking for work) (28 compared with 33 percent).

Finally, we interviewed study participants who were not working at application about their most recent job prior to application. Persons who exited VR into noncompetitive employment had worked more years in that job (4.3 versus 3.6) but had earned lower hourly wages ($5.38 versus $7.40). More consumers who exited VR into competitive employment had worked in competitive employment (94 versus 72 percent), while exiters into noncompetitive employment had worked in extended employment (13 versus 2 percent), or supported employment (9 versus 1 percent). More persons who exited into competitive employment reported having held their most recent job prior to VR application in professional, managerial, or technical (23 versus 16 percent), or clerical/sales (18 versus 15 percent) occupations, while more exiters into noncompetitive employment reported having held a job in miscellaneous occupations (25 versus 13 percent).

Career-Related Interests and Motivations, Including Vocational Goals (Tables D-10, D11)

Persons who exited VR into competitive employment were consistently more knowledgeable regarding careers (Table 5-4[17]). They had greater knowledge of specific jobs in which they might be interested and of the characteristics of different types of jobs. They were better informed about the nonmonetary benefits of jobs and about issues associated with career status and advancement. Finally, they possessed stronger employment-related information-gathering skills. The two groups were similar in the occupational field of their vocational goal. About one-third of each group selected a goal in a professional, managerial, or technical field (34 percent of persons exiting into competitive employment; 36 percent of those exiting into noncompetitive employment); nearly one-fifth selected a job in clerical/sales fields (18 percent each). About the same percentages of both groups selected a service occupation (21 and 17 percent).

Table 5-4. Career-Related Interests and Knowledge of Persons Who Entered Competitive or Noncompetitive Employment

	Competitive Employment	Noncompetitive Employment
Of specific jobs*	HIGHER	Lower
Of different jobs*	HIGHER	Lower
Nonmonetary benefits of jobs*	HIGHER	Lower
Career advancement*	HIGHER	Lower
Information gathering skills*	HIGHER	Lower

*Significant difference ($p < .05$).

In terms of motivation for seeking VR services, more persons who entered competitive employment listed desire to obtain help for vocational training or college than did those entering noncompetitive employment (68 versus 51 percent). About one-third of each group noted that a friend or family member had recommended VR (31 percent of competitively employed persons and 29 percent of noncompetitively employed consumers). Less than 20 percent of either group had prior VR closures (16 percent of competitively employed consumers, 21 percent of others—a nonsignificant difference). Competitively and noncompetitively employed consumers shared about the same number of prior closures (1.25 and 1.27, respectively).

Likelihood of Achieving a Competitive Employment Outcome

Since the findings reported in this chapter revealed significant differences in a number of characteristics between persons who achieved a competitive employment outcome and persons whose employment outcome was not competitive, we conducted a correlation analysis using all of the variables on which the two groups differed. Table F-4 (Appendix F) is a correlation matrix that reports the results of this analysis. As noted in the matrix, a number of variables that relate to achievement of competitive employment also relate to each other. For example, grade level achievement in both reading and mathematics is negatively related to mental retardation (-0.45 and -0.41) and learning disability (-0.24 and -0.17). Receipt of special education services in high school is positively related to these two disabilities (0.43 for persons with mental retardation and 0.37 for persons with learning disability) and negatively related to orthopedic impairments (-0.21). Knowledge of specific jobs (0.44) and knowledge of different jobs (0.51) were related to employment-related information gathering skills, and knowledge of nonmonetary benefits of jobs was related to knowledge of specific jobs (0.32).

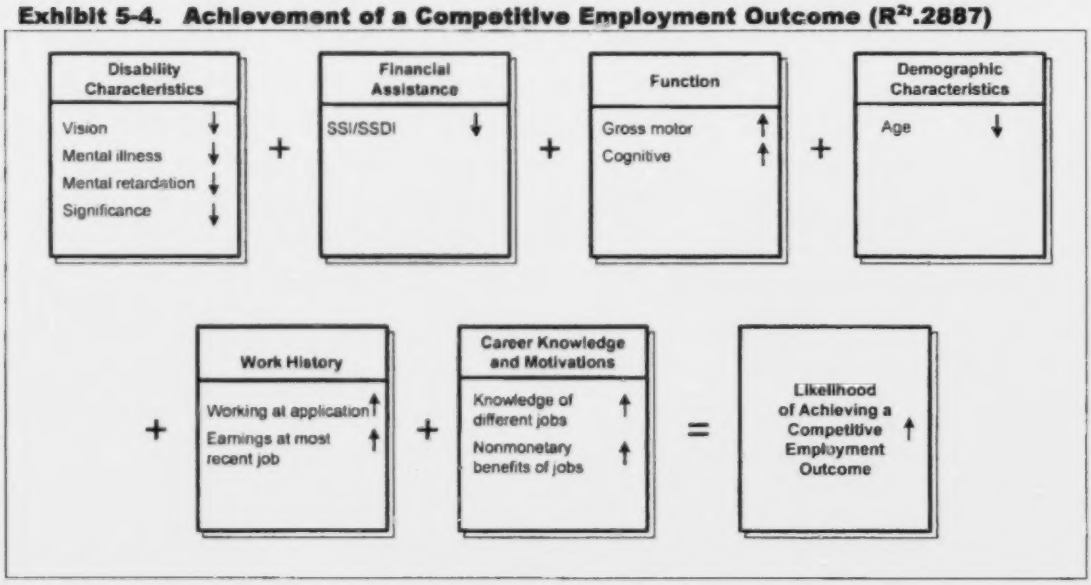
We also conducted logistic regression analyses to investigate the unique contributions of the consumer characteristics in predicting the achievement of a competitive employment outcome. We looked at the following variables to determine which would predict achieving an employment outcome:

- *disability characteristics* (type and significance of disability);
- *receipt of financial assistance at application* (including SSI/SSDI);
- *functional status* (gross motor function, cognitive function, and personal care function);
- *educational characteristics* (reading achievement level, math achievement level, and receipt of special education services in high school);
- *work history* (never having worked, having worked but not for 2 years, having worked more recently than 2 years, never having worked for two consecutive weeks; years in most recent job; and hourly wages in most recent job);
- *career-related interests and motivations* (knowledge of specific jobs, knowledge of different jobs, knowledge of nonmonetary benefits of jobs, interest in career advancement, information gathering skills, and reason for applying to VR); and
- *demographic characteristics* (age and race).

As shown in Exhibit 5-4[18], the logistic regression analyses revealed a number of characteristics that affected the likelihood that a consumer's employment outcome would be in the competitive labor market. We present the odds ratios for these variables in Appendix G, Table G-4. Individuals with a vision impairment, mental illness, or mental retardation were less likely to achieve competitive employment than were persons with other types of disabilities. Having a significant or most significant disability also decreased the odds of competitive employment, as did receipt of SSI or SSDI. Higher levels of gross motor function and cognitive function were associated with achievement of a competitive employment outcome also. Being older decreased the odds of competitive employment.

In terms of work history, working at application or having higher earnings in the most recent job prior to application to VR increased the likelihood of competitive employment. In terms of career interests, knowledge, and motivation for applying to VR, greater knowledge of different jobs and more understanding of the nonmonetary benefits of jobs increased the odds of competitive employment. We note that the regression model achieves a level of prediction that is very strong in social science research, accounting for nearly 29 percent of the variance.

Exhibit 5-4. Achievement of a Competitive Employment Outcome (R^2=.2887)



Chapter 6

Significance of Disability

Of the consumers designated by VR agencies as having a significant disability, what are their characteristics?

Over four-fifths (82 percent) of persons who are eligible for and receive VR services have a disability that meets the VR program's statutory criteria as significant or most significant. While the Rehabilitation Act provides the definition of a significant disability, the definition and criteria for classifying someone as having a most significant disability are left to the states.[2] Our previous analyses of data from the longitudinal study have shown that the two groups - persons with significant disabilities and persons with most significant disabilities - are highly similar. Consequently, for these and other analyses contained in this and other chapters of this report, we conducted analyses on two groups - those whose disabilities are significant or most significant and those whose disabilities are nonsignificant. We included in the analysis persons who had received VR services (i.e., persons who exited VR with an employment outcome, persons who exited without such an outcome after receiving services, and persons still receiving services at the end of the study's data collection period). As with prior chapters, we compare the two groups in terms of disability, functional status, receipt of benefits, demographic and educational characteristics, work history, and career-related knowledge and interests. Unless otherwise noted in the text, all differences discussed in the text are statistically significant. Tables on which the discussion is based appear in Appendix E.

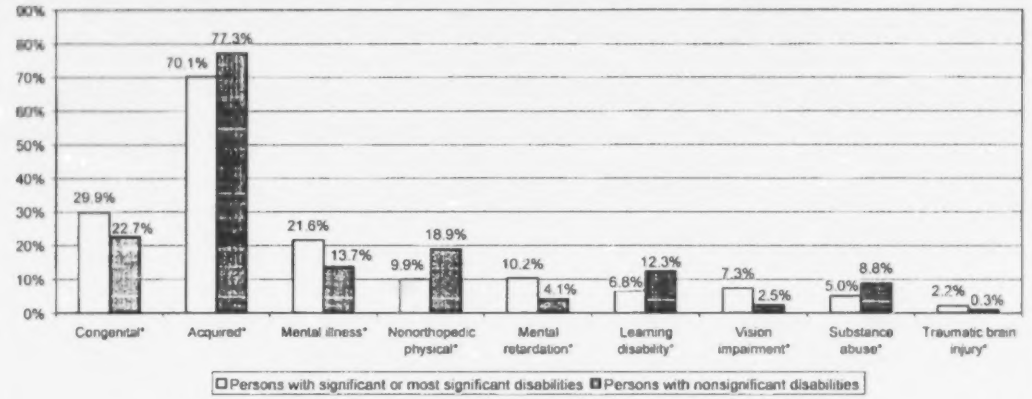
Disability Characteristics (Table E-1)

In terms of type of disability, more persons whose disabilities were significant or most significant had mental illness (22 versus 14 percent for those with nonsignificant disabilities), mental retardation (10 versus 4 percent), vision impairments (7 versus 3 percent), or traumatic brain injuries (2 versus 0.3 percent) (Exhibit 6-1). More persons whose disabilities were nonsignificant had a learning disability (12 versus 7 percent) or substance abuse disability

[2] Section 7(21)(E)(i): "IN GENERAL.–The term 'individual with a most significant disability', used with respect to an individual in a State, means an individual with a significant disability who meets criteria established by the State under section 101(a)(5)(C)."

(9 versus 5 percent). More persons with significant/most significant disabilities had disabilities that were congenital (30 versus 23 percent).

Exhibit 6-1. Disability Characteristics by Significance of Disability



*Significant difference ($p < .05$).

Receipt of SSI or SSDI (Table E-2)

As expected, more consumers with significant disabilities were receiving financial assistance at entry (51 compared with 29 percent among persons whose disabilities were nonsignificant) (Table 6-1[19]). More were receiving both SSI/disabled (19 percent of all consumers versus 3 percent) and SSDI (13 versus 1 percent, respectively). They had also been receiving SSDI for longer periods (average of 61.1 months versus 22.3 months), and more of those who had received financial assistance reported benefits as their primary source of support (77 versus 68 percent). In terms of work history, persons with significant/most significant disabilities more often reported never having worked (10 versus 7 percent) and having worked but not in the two years prior to application for VR (42 versus 32 percent). More persons with nonsignificant disabilities were working at application for VR services (16 versus 15 percent).

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Table 6-1. Receipt of SSI/DI at Study Entry, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Type of benefit	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Receiving financial assistance at study entry*	50.8	28.5
Type of financial assistance, percentage of all consumers		
SSI/disabled*	19.1	2.9
Mean (median) months receiving	55.3 (36.0)	32.9 (12.0)
Mean (median) monthly amount	$407.48 ($434.00)	$447.17 ($458.00)
SSDI*	13.4	1.4
Mean (median) months receiving*	61.1 (36.0)	22.3 (13.0)
Mean (median) monthly amount	$563.78 ($526.00)	$564.15 ($534.00)
Primary source of support among persons receiving financial assistance		
Benefits*	76.8	68.3
Family or friends	17.9	22.2
Self (earnings)	5.3	9.5

*Significant difference ($p < .05$).

Functional Status and Selected Psychosocial Characteristics (Table E-3)

On average, VR consumers with significant/most significant disabilities were more limited in gross motor, cognitive, and personal care function (Table 6-2[20]). They also had lower self-esteem. The two groups did not differ in terms of self-efficacy or belief that powerful others controlled events.

Table 6-2. Functional and Psychosocial Characteristics of Persons with Significant or Most Significant Disabilities and Those with Nonsignificant Disabilities

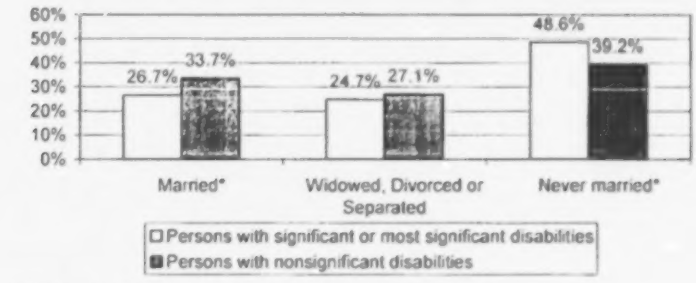
	Significant Disabilities	Nonsignificant Disabilities
Gross motor*	Lower	HIGHER
Cognitive*	Lower	HIGHER
Personal care*	Lower	HIGHER
Self-esteem*	Lower	HIGHER

*Significant difference ($p < .05$).

Demographic Characteristics (Table E-4)

More consumers with significant/most significant disabilities were male (52 percent compared with 48 percent of consumers with nonsignificant disabilities); average age was about the same: 42.1 years for the former group and 41.4 years for the latter. The two groups did not differ much in terms of race/ethnicity; more persons with nonsignificant disabilities were of Hispanic origin (13 versus 10 percent), but the difference was not significant. As shown in Exhibit 6-2[21], more of those with significant/most significant disabilities had never married (49 versus 39 percent), while more of the group with nonsignificant disabilities were married at the time of study entry (34 percent compared with 28 percent); the group with nonsignificant disabilities also had more dependents (mean of 1.1 versus 0.8).

Exhibit 6-2. Marital Status of Persons with Significant or Most Significant Disabilities and Those with Nonsignificant Disabilities



*Significant difference ($p < .05$).

Educational Status and Achievement (Table E-5)

Fewer consumers with significant disabilities had dropped out of high school than had consumers whose disabilities were not significant (24 versus 29 percent) (Table 6-3[22]). More consumers with significant disabilities had attained a bachelor's degree (6 versus 4 percent) or master's degree (2 versus 1 percent), although the proportion of consumers achieving higher

Table 6-3. Educational Characteristics of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Educational level at application		
Less than high school diploma/GED*	23.6	28.7
High school/GED	63.0	61.7
Two-year associate's degree	5.1	4.9
Four-year bachelor's degree*	6.2	4.1
Master's degree*	1.8	0.5
Doctoral degree	0.3	0.2
Total	100.0	100.0
Received special education services in high school*	26.1	17.3
Reading achievement level		
Mean	8.4	8.6
Median	9.0	9.0
Mathematics achievement level		
Mean*	7.6	8.2
Median	7.0	8.0

*Significant difference ($p < .05$).

degrees was small for both groups.[2] Persons with significant disabilities more often received special education services in high school (26 compared with 17 percent); their reading achievement grade level was about the same as that of consumers with nonsignificant disabilities (8.4 versus 8.6), although their mathematics achievement levels was lower (7.6 versus 8.2).

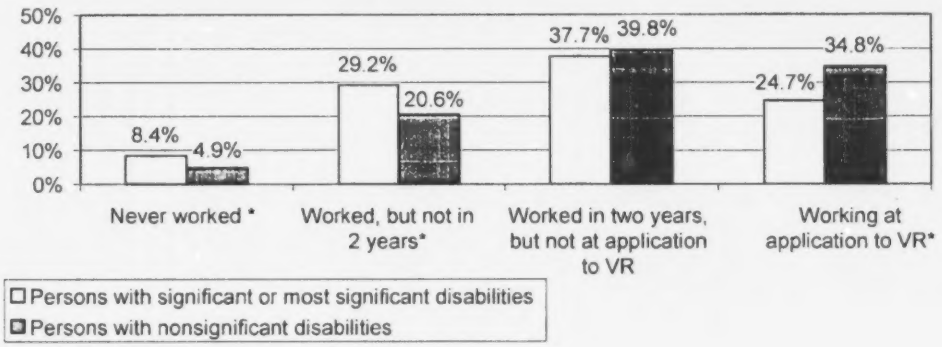
Work History and Preservice Earnings (Tables E-6, E-7, E-8, E-9)

As shown in Exhibit 6-3[23], in terms of general work history of the two groups, nearly twice as many consumers with significant or most significant disabilities as those with nonsignificant disabilities reported never having worked two consecutive weeks (8 versus 5 percent). They also more frequently reported having worked at some time but not in the two years prior to VR application (29 versus 21 percent). They less frequently reported working at application (25 and 35 percent, respectively). Among those who had worked, consumers with significant/most significant disabilities had worked at fewer jobs overall than consumers with nonsignificant

[2] Types of significant/most significant disabilities among consumers with bachelor's or master's degrees included orthopedic impairments (32 percent of persons with these degrees), mental illness (28 percent), nonorthopedic physical impairments (12 percent), and vision impairments (11 percent).

disabilities: 38 percent of the former, and 33 percent of the latter reported having held only one job, while fewer reported having held three (12 versus 15 percent) or four (4 versus 6 percent) jobs over their working life. They had averaged about the same number of years in each job they had held, however (3.5 years for consumers with significant and 3.4 years for those with nonsignificant disabilities).

Exhibit 6-3. General Work History of Persons with Significant or Most Significant Disabilities and Those with Nonsignificant Disabilities



*Significant difference ($p < .05$).

Among consumers who were working at application, those with significant disabilities averaged fewer hours per week on the job (31.5 versus 34.5); their hourly earnings were slightly higher ($7.66 versus $7.13), although this finding was not significant. Fewer of those with significant disabilities who were working at application reported a job in the competitive labor market (82 versus 93 percent); they more often worked in extended employment (6 versus 1 percent) or supported employment (3 versus less than 1 percent). Their job at application was more often in benchwork occupations (5 versus 2 percent).

Persons in the two groups who were not working at application did not differ much in their current activities. The same percentage reported that they were students (20 percent of both groups). About the same percentage were not working and not looking for work (30 percent of persons with significant disabilities and 32 percent of those with nonsignificant disabilities), and about two-fifths of both groups reported that they were not working but were looking for work.

Consumers who were not working at application to VR but who had worked in the past provided details on their most recent job. Both groups of consumers had worked about the same number of years in their most recent job (3.6 years for persons with significant disabilities and 3.3 years for persons with nonsignificant disabilities), although persons with significant disabilities had worked fewer hours (34.8 versus 36.2 hours, on average). Fewer of those with significant disabilities had worked in the competitive labor market (85 versus 92 percent); more had worked in extended employment (4 versus 1 percent) or supported employment (2 versus 1 percent). Persons with nonsignificant disabilities had more often held jobs in structural work (7 versus 4 percent). The two groups were similar in the other occupational fields of their most recent job prior to their application for VR services.

Career-Related Interests and Motivations, Including Vocational Goals (Tables E-10, E-11)

VR consumers with nonsignificant disabilities had stronger knowledge of specific jobs and greater perceptions of career status and advancement issues than did persons with significant or most significant disabilities (Table 6-4[24]). They were similar in their knowledge of the requirements of different jobs, their perspectives on the nonmonetary benefits of working, and their career-related information-gathering skills. The two groups did not differ markedly regarding the occupational field in which they selected their initial vocational goal.

Table 6-4. Career-Related Interests and Knowledge of Persons with Significant or Most Significant Disabilities and Persons with Nonsignificant Disabilities

	Significant or Most Significant Disabilities	Nonsignificant Disabilities
Of specific jobs*	Lower	HIGHER
Career advancement*	Lower	HIGHER

*Significant difference ($p < .05$).

In terms of motivation for seeking VR services, more persons with significant/most significant disabilities indicated that they were required by Social Security to apply for services (5 versus 3 percent), although not many in either group provided this reason. Nearly twice as many consumers with nonsignificant disabilities indicated that they sought VR services in order to obtain medical treatment (28 versus 14 percent). Persons with significant/most significant disabilities more often had prior VR closures (17 versus 13 percent), averaging 1.26 such closures (versus 1.15 such closures among persons with nonsignificant disabilities).

Chapter 7

Summary of Findings

The issue addressed in this first of a series of final reports on the VR longitudinal study concerns what characteristics of persons with disabilities affect their access to and receipt of VR services, and, for those who received VR services, their likelihood of achieving an employment outcome as a result of their investment in VR. This report has examined that question through analysis of information collected from and about persons who applied to VR, including comparisons of the characteristics of:

- persons who, following application for VR services, were accepted or not accepted for services;
- applicants who were determined eligible and received services and those eligible persons who made a decision not to enter VR; and
- persons who, having received services, did or did not achieve an employment outcome or a competitive employment outcome.

In addition, we compared the characteristics of persons receiving services whose disability was classified as significant or most significant with those of persons whose disability was classified as nonsignificant.

As noted in previous chapters, a number of characteristics of individuals with disabilities do appear to affect their involvement with the VR program; at least some of these characteristics are amenable to the types of services and other supports that the program offers its consumers. (For example, support for training or education may improve occupational skills and knowledge of how to maneuver in the labor market, thus affecting likelihood of a competitive employment outcome; or provision of assistive technology may improve an individual's ability to obtain the type of job he or she wants.) In this chapter, we summarize the findings presented throughout the earlier chapters regarding differences in characteristics of persons who enter and leave the program at various stages in the VR process.

Access to VR Services

Approximately 13 percent (or 21.3 million persons) of working-age Americans have a disability (National Health Interview Survey, 1994-95), and, according to a recent study, as many as 3.3 million of those persons (or 16 percent) might benefit from VR services (Overman and Schmidt-Davis, 2000). In FY 1995, the VR program accepted around 1.25 million persons for services. Findings from the longitudinal study indicated that persons accepted for services represented over 80 percent of those who actually applied for VR services.

Our findings regarding the characteristics of persons accepted for VR services, in comparison to those who applied but were not accepted, indicate that the two groups, while similar, differed on a number of factors. Persons accepted for services were more likely to have a disability that was significant or most significant and congenital rather than acquired. Those whose primary disability was mental retardation or hearing impairment were more likely to be accepted for services than were persons with a nonorthopedic physical impairment. In terms of work history, persons who were not working at application and were a student, unpaid family worker, or volunteer were more often accepted than others; and if working at application, they were more likely to be accepted if they were working in a clerical or sales job than a job in some other field and less likely to be accepted in they were in extended or supported employment..

Additionally, applicants accepted for services were more often receiving SSI at application for VR services than were persons not accepted. They had more often competed high school or a GED and more often received special education services in high school. Eligible applicants had higher self-esteem than did those determined ineligible and had greater knowledge of specific jobs they were interested in and greater employment-related information gathering skills.

Receipt of VR Services

Around 12 percent of persons accepted for VR services choose not to enter services. While these two groups both meet the VR eligibility criteria and are similar on most dimensions, several factors affect the likelihood that an individual with a disability who is accepted for services will complete an IPE and obtain VR services. Receiving SSI or SSDI decreased the likelihood that persons eligible for VR services would actually enter services, although receipt of

other forms of financial assistance (e.g., support from family or friends; receipt of general assistance or Worker's Compensation) increased the likelihood of receiving services. Lack of a work history (i.e., never having worked at a job two consecutive weeks) decreased the likelihood of entering VR services as well. Higher gross motor function, greater knowledge of specific jobs, and the motivation to apply for VR services in order to obtain an assistive technology device or service increased the likelihood of receiving services.

As noted above, on many dimensions, consumers who received services and those who were eligible but chose not to receive services were similar. For example, four-fifths of both groups had a significant or most significant disability. They did not differ in most demographic or educational characteristics. However, in addition to their difference in work history noted above, there were some other differences between the two groups. More persons who received services were working at application to VR, and more of those not working at application were students, than was the case with eligible persons who dropped out before receiving services. Persons who obtained services had higher self-esteem and higher personal care function, as well.

Achievement of an Employment Outcome

About two-thirds of persons who received services achieved an employment outcome as a result of those services. A number of characteristics of persons who received VR services affected their odds of obtaining an employment outcome as a result of VR services. In terms of disability type, persons with vision, hearing, orthopedic impairments or mental retardation were more likely than those with other types of disabilities to obtain employment. Receipt of SSI, SSDI, or other types of financial assistance reduced the likelihood of obtaining an employment outcome following VR services. Higher gross motor function, higher self-esteem, having been working at application, need for AT devices or services as a motive for applying for VR, and having more dependents all increased the odds of an employment outcome, while being nonwhite or seeking help for postsecondary education decreased those odds. Thus, a combination of disability factors, work status, and financial situation played an important role in VR outcomes for consumers who received services through the program.

On other dimensions, the two groups were similar. Four-fifths of both groups had a significant or most significant disability. In terms of educational status, about the same percentage had received special education services in high school, and their grade-level achievement in reading and mathematics was about the same. More consumers who failed to obtain an employment outcome than those who were successful had dropped out of high school, but this difference was not significant. Similar proportions of both groups who were not working at application reported that their most recent job prior to application to VR had been in the competitive labor market, and their vocational goals were similar, with about one-third listing a goal in professional, managerial, or technical occupations, one-fifth seeking employment in clerical/sales services, and one-fifth in service occupations.

Achievement of a Competitive Employment Outcome

Among persons achieving an employment outcome, 77.9 percent entered jobs in the competitive labor market, while 22.1 percent held noncompetitive jobs. A number of characteristics increased or decreased the odds of employment in the competitive labor market. In terms of type of disability, having a vision impairment or learning disability decreased the likelihood of competitive employment, while having a hearing impairment or substance abuse increased those odds. Having a disability that was significant or most significant decreased the likelihood of a competitive job, as did receipt of SSI or SSDI. Higher gross motor or cognitive function increased likelihood of competitive employment, as did working at application to VR or, absent working at application, having worked in the two years prior to application. Lack of a work history decreased the likelihood of a competitive employment outcome, as did being relatively older. Finally, certain aspects of career-related knowledge and motivations affected likelihood of obtaining a job in the competitive labor market. Having greater knowledge of different jobs and of the nonmonetary benefits of jobs increased the odds of competitive employment, while a desire to obtain medical treatment as a motive for applying for services decreased the odds of obtaining a competitive job among persons who exited VR with an employment outcome.

Persons who obtained a job in the competitive labor market as a result of VR services were similar to those obtaining noncompetitive employment on some characteristics and differed on others. About the same percentage had failed to complete high school, although reading and

mathematics grade level achievement was higher for competitively employed than for noncompetitively employed persons. They did not differ on such characteristics as self-esteem or self-efficacy, and their vocational goals were similar. Persons achieving competitive employment outcomes more often mentioned the need to obtain help for vocational training or college as a motive for seeking VR services, and, if they were not working at application, more often were students at that time. Conversely, persons with a noncompetitive employment outcome who were not working at application more often reported that they were not in the labor force (i.e., were not working and not looking for work).

Significance of Disability

As noted previously, around four-fifths of persons who received VR services had a disability that was classified as significant or most significant. In terms of types of disabilities, more persons with significant/most significant disabilities had mental illness, mental retardation, a vision impairment, or traumatic brain injury than did persons with nonsignificant disabilities. The latter more often had a nonorthopedic physical disability, learning disability, or substance abuse disability. Persons with significant/most significant disabilities were nearly twice as likely to be receiving public financial assistance at entry, six times as likely to receive SSI/disabled, and much more likely to be receiving SSDI. A very small percentage of persons with nonsignificant disabilities were receiving SSI/disabled or SSDI.

In terms of demographic characteristics and educational status, more persons with significant/most significant disabilities were male and never married. They had more often completed high school and more often received special education services in high school. Their grade level achievement in mathematics was lower.

Persons with significant/most significant disabilities more often had no work history, more often had been unemployed for at least two years if they had a work history, and less often worked at application. If employed at application, they were less often in the competitive labor market and more often in extended employment or supported employment, generally working fewer hours per week than consumers with nonsignificant disabilities.

In terms of personal characteristics, persons with significant/most significant disabilities had more serious functional limitations and lower self-esteem than did consumers with nonsignificant disabilities. They were less well informed regarding specific jobs and factors related to career status and advancement, as well.

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APPENDIX A

TABLES ON ACCESS TO VR SERVICES

Table A-1. Disability Characteristics of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Percentage	
	Persons eligible for services	Persons not eligible for services
Type of disability		
Orthopedic, including amputation	28.5	29.5
Mental illness	20.7	17.3
Nonorthopedic physical*	11.5	17.7
Mental retardation*	8.9	2.9
Hearing impairment*	8.0	3.3
Learning disability	7.8	8.9
Vision impairment	5.8	9.6
Substance abuse	5.8	7.9
Traumatic brain injury	2.0	2.0
All other conditions	1.0	1.0
Total	100.0	100.0
Significance of disability		
Most significant/significant*	82.1	64.9
Nonsignificant	17.9	35.1
Total	100.0	100.0
Onset of disability		
Congenital*	27.6	16.4
Acquired*	72.4	83.6
Total	100.0	100.0

*Significant difference ($p < .05$).

Table A-2. Receipt of SSI/DI at Study Entry, Comparing Persons Eligible for Services with Those Determined Not Eligible

Type of benefit	Percentage	
	Persons eligible for services	Persons not eligible for services
Receiving financial assistance at study entry	47.8	43.7
Type of financial assistance, percentage of all consumers		
SSI/disabled*	16.8	10.9
Mean (median) months receiving	55.0 (36.0)	57.3 (60.0)
Mean (median) monthly amount	$405.07 ($435.00)	$437.73 ($458.00)
SSDI	12.0	10.9
Mean (median) months receiving	56.2 (35.0)	37.3 (17.0)
Mean (median) monthly amount	$566.16 ($526.00)	$591.33 ($490.00)
Primary source of support among persons receiving financial assistance		
Benefits	76.9	80.8
Family or friends	17.7	17.2
Self (earnings)*	5.4	2.1
Work history of persons receiving SSI/DI		
Never worked for 2 consecutive weeks	10.9	11.6
Have worked, but not in 2 years prior to application to VR	41.6	46.4
Have worked in 2 years prior to VR entry, but not working at application to VR	32.9	27.0
Working at application to VR*	14.6	15.0
Total	100.0	100.0

*Significant difference ($p < .05$).

Table A-3. Functional Status and Psychosocial Characteristics of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible[a]

	Persons eligible for services	Persons not eligible for services
Functional status[b]	***Mean***	***Mean***
Gross motor	1.82	1.78
Cognitive	1.84	1.84
Personal care	1.97	1.97
Psychosocial characteristics[c]		
Self-esteem*	2.49	2.43
Self-efficacy	2.33	2.27
Belief events are controlled by powerful others*	1.66	1.72

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on these composite measures range from 1 to 2.

[c] Values on these composite measures range from 1 to 3.

Table A-4. Demographic Characteristics of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Percentage	
	Persons eligible for services	Persons not eligible for services
Gender		
Male	51.3	57.9
Female	48.7	42.1
Total	100.0	100.0
Age		
<21	0.6	1.2
22 – 29	22.3	20.9
30 – 39	22.9	22.5
40 – 49	27.6	27.7
50 - 59	17.1	20.2
60 – 64	4.2	3.3
>64	5.3	4.1
Total	100.0	100.0
Mean	41.9	41.9
Median	41.0	42.0
Race/ethnicity		
White	84.3	78.2
African-American	14.2	20.5
Alaska Native or American Indian*	0.6	0.2
Asian or Pacific Islander	0.9	1.1
Total	100.0	100.0
Of Hispanic origin	10.0	6.7
Marital status		
Married	27.9	31.8
Widowed	3.6	3.4
Divorced	16.1	18.2
Separated	5.8	5.4
Never married*	46.6	41.2
Total	100.0	100.0
Number of dependents		
Mean	0.9	0.9
Median	0.0	0.0
Minimum	0.0	0.0
Maximum	12.0	6.0

*Significant difference ($p < .05$)

Table A-5. Educational Characteristics of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Percentage	
	Persons eligible for services	Persons not eligible for services
Educational level at application		
Less than high school diploma/GED*	25.0	31.2
High school/GED	62.4	58.9
Two-year associate's degree	5.1	3.8
Four-year bachelor's degree	5.8	4.4
Master's degree	1.5	1.6
Doctoral degree	0.2	0.0
Total	100.0	100.0
Received special education services in high school*	24.4	14.3
Reading achievement level		
Mean	8.4	8.4
Median	9.0	9.0
Mathematics achievement level		
Mean	7.6	7.6
Median	7.0	8.0

*Significant difference ($p < .05$).

Table A-6. **Work History of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible**

Status	Percentage	
	Persons eligible for services	Persons not eligible for services
General work history		
Never worked for two consecutive weeks	8.3	8.8
Have worked, but not in 2 years prior to application to VR	27.9	26.9
Have worked in two years prior to VR entry, but not working at application to VR	38.2	32.5
Working at application to VR*	25.6	31.8
Total	100.0	100.0
Number of jobs held		
None	8.3	8.8
One	37.1	40.7
Two	27.1	23.7
Three	12.3	9.5
Four	4.6	4.3
Five or more	2.3	4.3
Do not know	8.4	8.7
Number of years in each job for consumers with a work history		
Mean	4.9	4.3
Median	2.0	2.0
Minimum	0.0	0.0

*Significant difference ($p < .05$).

Table A-7. Work Status of VR Applicants Who Were Working at Application, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Percentage	
	Persons eligible for services	Persons not eligible for services
	Mean (median)	Mean (median)
Number of years in job	4.9 (2.0)	4.3 (2.0)
Hours worked per week	32.2 (36.0)	31.4 (35.0)
Hourly wages	$7.47 ($6.00)	$7.46 ($6.00)
For persons working at application, type of job		
Competitive labor market	89.6	92.4
Extended employment*	4.8	1.1
Supported employment*	1.9	0.0
Homemaker	0.2	0.0
Unpaid family worker	0.4	0.0
Other	3.1	6.5
Total	100.0	100.0
For persons working at application, type of occupation		
Professional, managerial, technical	20.2	19.8
Clerical/sales*	21.8	14.5
Service	29.9	30.8
Machine trades	4.0	6.3
Benchwork	4.5	1.9
Structural work	4.2	6.5
Processing	1.9	3.4
Agriculture	2.3	3.9
Miscellaneous	11.1	13.0
Total	100.0	100.0

*Significant difference ($p < .05$).

Table A-8. Labor Force Status of VR Applicants not Working at Application, Comparing Persons Eligible for Services with Those Determined Not Eligible

Labor Force Status	Percentage	
	Persons eligible for services	Persons not eligible for services
Not working, but looking for work	39.1	43.5
Not working, and not looking for work	31.4	38.2
Student*	18.2	8.7
Homemaker	7.6	7.3
Trainee or worker in noncompetitive environment	0.9	1.9
Unpaid family worker*	1.8	0.5
Volunteer worker*	1.1	0.0

*Significant difference ($p < .05$).

Table A-9. Characteristics of Most Recent Job of VR Applicants Who Were not Working at Application, Comparing Persons Eligible for Services with Those Determined Not Eligible

Characteristic	Persons eligible for services	Persons not eligible for services
	Mean (median)	*Mean (median)*
Number of years in job	3.5 (1.0)	3.6 (1.0)
Hours worked per week	35.2 (40.0)	36.4 (40.0)
Hourly wages	$7.36 ($5.71)	$7.43 ($6.00)
For persons not working at application but who ever worked, type of most recent job	*Percentage*	*Percentage*
Competitive labor market	90.3	91.8
Extended employment*	3.4	0.8
Supported employment	2.0	1.0
Homemaker	0.2	0.6
Unpaid family worker*	0.3	0.0
Other	3.8	5.8
Total	100.0	100.0
For persons not working at application but who ever worked, occupational type of most recent job		
Professional, managerial, technical	21.0	19.8
Clerical/sales	17.6	14.8
Service	28.1	28.2
Machine trades	4.9	5.9
Benchwork	4.6	5.4
Structural work	4.6	7.4
Processing	2.1	2.9
Agriculture	2.0	2.1
Miscellaneous	15.2	13.4
Total	100.0	100.0

*Significant difference ($p < .05$).

Table A-10. Career-Related Interests and Knowledge of VR Applicants, Comparing Persons Eligible for Services with Those Determined Not Eligible[a]

Characteristic	Persons eligible for services	Persons not eligible for services
Interest and knowledge[b]	***Mean***	***Mean***
Of specific jobs*	2.59	2.48
Of different jobs	2.59	2.53
Nonmonetary benefits of jobs	2.81	2.80
Career advancement	2.31	2.27
Information gathering skills*	2.46	2.30
Occupational type of vocational goal	***Percentage***	***Percentage***
Professional, managerial, technical	34.4	32.8
Clerical/sales	17.6	15.6
Service	21.3	23.6
Machine trades	2.9	5.0
Benchwork	7.1	9.1
Structural work	3.3	3.5
Processing	0.9	1.8
Agriculture	1.4	0.9
Miscellaneous	3.9	4.5
Other	3.0	1.9
Homemaker	4.1	1.4
Total	100.0	100.0

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on composite measures range from 1 to 3.

Table A-11. Motivation for Applying for VR Services, Comparing Persons Eligible for Services with Those Determined Not Eligible

Motivation for application to VR[a]	Percentage	
	Persons eligible for services	Persons not eligible for services
To obtain medical treatment	16.5	22.0
To obtain an assistive device or service	16.7	11.8
To obtain counseling or psychotherapy	24.7	32.2
Required by Social Security	4.8	5.8
VR suggested by another agency	46.5	43.2
A friend or family member recommended VR	29.5	35.0
For help in getting or keeping a job	75.9	75.3
To obtain help for vocational training or college	75.2	71.9
Prior VR experience		
Persons with prior VR closures	16.6	12.9
Number of prior closures		
Mean*	1.25	1.13
Median	1.00	1.00

*Significant difference ($p < .05$).

APPENDIX B

TABLES ON RECEIPT OF VR SERVICES

Table B-1. Disability Characteristics of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Characteristic	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Type of disability		
Orthopedic, including amputation*	27.8	32.9
Mental illness	20.2	23.9
Nonorthopedic physical	11.5	11.9
Mental retardation	9.1	7.7
Hearing impairment*	8.7	3.4
Learning disability	7.8	8.2
Vision impairment*	6.4	1.9
Substance abuse	5.7	6.2
Traumatic brain injury	1.8	3.3
All other conditions	1.0	0.7
Total	100.0	100.0
Significance of disability		
Most significant/significant	82.4	80.7
Nonsignificant	17.6	19.3
Total	100.0	100.0
Onset of disability		
Acquired*	71.4	78.7
Congenital*	28.6	21.4
Total	100.0	100.0

*Significant difference ($p < .05$).

Table B-2. Receipt of SSI/DI at Study Entry, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Type of benefit	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Receiving financial assistance at study entry*	46.9	56.8
Type of financial assistance, percentage of all consumers		
SSI/disabled*	16.2	20.9
Mean (median) months receiving	54.6 (36.0)	57.2 (36.0)
Mean (median) monthly amount	$406.94 ($435.00)	$395.25 ($434.00)
SSDI*	11.4	15.8
Mean (median) months receiving*	60.4 (36.0)	34.3 (24.0)
Mean (median) monthly amount	$563.63 ($526.00)	$578.75 ($506.00)
Primary source of support among persons receiving financial assistance		
Benefits*	76.0	81.8
Family or friends	18.3	14.4
Self (earnings)	5.7	3.8
Work history of persons receiving SSI/DI		
Never worked for 2 consecutive weeks*	10.0	15.4
Have worked, but not in 2 years prior to application to VR	41.4	42.5
Have worked in 2 years prior to VR entry, but not working at application to VR	33.6	29.3
Working at application to VR*	15.0	12.8
Total	100.0	100.0

*Significant difference ($p < .05$).

Table B-3. Functional Status and Psychosocial Characteristics of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services[a]

	Persons eligible and receiving services	Persons eligible but not receiving services
Functional status[b]	***Mean***	***Mean***
Gross motor*	1.82	1.76
Cognitive	1.84	1.85
Personal care*	1.97	1.96
Psychosocial characteristics[c]		
Self-esteem*	2.49	2.43
Self-efficacy	2.33	2.32
Belief events are controlled by powerful others	1.66	1.65

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on these composite measures range from 1 to 2.

[c] Values on these composite measures range from 1 to 3.

Table B-4. Demographic Characteristics of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Characteristic	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Gender		
Male	50.9	54.6
Female	49.2	45.4
Total	100.0	100.0
Age		
<21	0.6	0.5
22 – 29	22.3	22.2
30 – 39	22.9	22.6
40 – 49	27.3	29.5
50 - 59*	16.7	19.9
60 – 64	4.4	3.3
>64*	5.8	2.1
Total	100.0	100.0
Mean	41.9991	41.1
Median	41.0	41.0
Race/ethnicity		
White	84.6	82.3
African-American	13.9	16.0
Alaska Native or American Indian	0.6	0.9
Asian or Pacific Islander	0.9	0.8
Total	100.0	100.0
Of Hispanic origin	10.3	8.5
Marital status		
Married	27.9	27.4
Widowed	3.6	3.9
Divorced	15.9	17.5
Separated	5.6	7.2
Never married	46.9	44.0
Total	100.0	100.0
Number of dependents		
Mean*	0.9	1.0
Median	0.0	1.0
Minimum	0.0	0.0
Maximum	12.0	9.0

*Significant difference ($p < .05$).

Table B-5. Educational Characteristics of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Characteristic	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Educational level at application		
Less than high school diploma/GED	24.5	28.2
High school/GED	62.8	59.6
Two-year associate's degree	5.1	5.6
Four-year bachelor's degree	5.8	5.7
Master's degree	1.6	0.8
Doctoral degree	0.3	0.1
Total	100.0	100.0
Received special education services in high school	24.5%	23.9
Reading achievement level		
Mean	8.4	8.3
Median	9.0	8.7
Mathematics achievement level		
Mean	7.7	7.4
Median	7.0	7.0

*Significant difference ($p < .05$).

Table B-6. Work History of VR Applicants, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Status	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
General work history		
Never worked for two consecutive weeks*	7.8	11.8
Have worked, but not in 2 years prior to application to VR	27.7	28.9
Have worked in two years prior to VR entry, but not working at application to VR	38.1	38.9
Working at application to VR*	26.4	20.4
Total	100.0	100.0
Number of jobs held		
None*	7.8	11.8
One	37.2	35.2
Two	27.1	25.9
Three	12.4	11.4
Four	4.6	4.4
Five or more	2.1	3.1
Do not know	8.8	8.2
Number of years in each job for consumers with a work history		
Mean	3.5	3.3
Median	2.0	2.0
Minimum	0.0	0.0
Maximum	36.0	34.0

*Significant difference ($p < .05$).

Table B-7. Work Status of VR Applicants Who Were Working at Application, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Characteristics	Persons eligible and receiving services	Persons eligible but not receiving services
	Mean (median)	Mean (median)
Number of years in job	5.0 (2.0)	3.6 (2.0)
Hours worked per week	32.2 (36.0)	31.6 (40.0)
Hourly wages	$7.53 ($6.00)	$6.85 ($5.80)
For persons working at application, type of job		
Competitive labor market	89.4	92.4
Extended employment	4.8	3.9
Supported employment*	2.0	0.0
Homemaker	0.1	1.4
Unpaid family worker	0.5	0.0
Other	3.2	2.4
Total	100.0	100.0
For persons working at application, type of occupation		
Professional, managerial, technical	20.5	16.3
Clerical/sales	21.9	20.9
Service	30.0	29.5
Machine trades	4.0	4.3
Benchwork*	4.3	6.6
Structural work	4.4	2.2
Processing	1.7	4.7
Agriculture	2.3	2.0
Miscellaneous	10.9	13.4
Total	100.0	100.0

*Significant difference ($p < .05$).

Table B-8. Labor Force Status of VR Applicants not Working at Application, Comparing Persons Eligible for and Receiving Services with Those Eligible but not Receiving Services

Labor Force Status	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
Not working, but looking for work	39.2	39.5
Not working, and not looking for work	30.0	38.9
Student*	19.5	8.9
Homemaker	7.4	8.9
Trainee or worker in noncompetitive environment	1.1	0.6
Unpaid family worker	1.9	0.9
Volunteer worker*	0.9	2.4

*Significant difference ($p < .05$).

Table B-9. Characteristics of Most Recent Job of VR Applicants Who Were not Working at Application, Comparing Persons Eligible for and Receiving Services with Persons Eligible but Not Receiving Services

Characteristic	Persons eligible and receiving services	Persons eligible but not receiving services
	Mean (median)	*Mean (median)*
Number of years in job	3.5 (1.0)	3.4 (1.0)
Hours worked per week	35.1 (40.0)	36.0 (40.0)
Hourly wages	$7.39 ($5.65)	$7.40 ($5.75)
For persons not working at application but who ever worked, type of most recent job	***Percentage***	***Percentage***
Competitive labor market	90.2	90.9
Extended employment	3.5	2.8
Supported employment	2.1	1.2
Homemaker	0.2	0.2
Unpaid family worker*	0.4	0.0
Other	3.6	4.9
Total	100.0	100.0
For persons not working at application but who ever worked, occupational type of most recent job		
Professional, managerial, technical	21.4	19.8
Clerical/sales	17.8	17.0
Service	27.8	28.4
Machine trades	5.1	4.2
Benchwork*	4.8	2.8
Structural work	4.5	5.2
Processing	2.0	3.1
Agriculture	1.9	1.7
Miscellaneous	14.8	17.9
Total	100.0	100.0

*Significant difference ($p < .05$).

Table B-10. Career-Related Interests and Knowledge of VR Applicants, Comparing Persons Eligible for and Receiving Services with Persons Eligible but Not Receiving Services[a]

Characteristic	Persons eligible and receiving services	Persons eligible but not receiving services
Interest and knowledge[b]	***Mean***	***Mean***
Of specific jobs*	2.59	2.49
Of different jobs	2.59	2.57
Nonmonetary benefits of jobs	2.82	2.77
Career advancement	2.31	2.24
Information gathering skills*	2.47	2.35
Occupational type of vocational goal	***Percentage***	***Percentage***
Professional, managerial, technical	34.8	31.9
Clerical/sales	17.5	17.9
Service	21.2	22.2
Machine trades	2.9	3.0
Benchwork	7.3	6.0
Structural work	3.4	2.8
Processing	0.9	1.3
Agriculture	1.4	1.6
Miscellaneous	3.9	3.7
Other	2.9	4.2
Homemaker	3.9	5.5
Total	100.0	100.0

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on composite measures range from 1 to 3.

Table B-11. Motivation for Applying for VR Services, Comparing Persons Eligible for and Receiving Services with Those Eligible but Not Receiving Services

Motivation for application to VR[a]	Percentage	
	Persons eligible and receiving services	Persons eligible but not receiving services
To obtain medical treatment	16.5	16.6
To obtain an assistive device or service*	17.4	9.7
To obtain counseling or psychotherapy	24.9	22.5
Required by Social Security	4.7	6.0
VR suggested by another agency	46.2	49.2
A friend or family member recommended VR	29.4	30.5
For help in getting or keeping a job	76.0	75.0
To obtain help for vocational training or college	74.6	81.7
Prior VR experience		
Persons with prior VR closures	16.5	16.8
Number of prior closures		
Mean	1.25	1.29
Median	1.00	1.00

*Significant difference ($p < .05$).
[a] Multiple responses were possible

APPENDIX C

TABLES ON ACHIEVEMENT OF EMPLOYMENT OUTCOMES

Table C-1. Disability Characteristics of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Characteristic	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
Type of disability	***Percentage***	***Percentage***
Orthopedic, including amputation*	26.1	28.7
Mental illness	17.3	26.3
Nonorthopedic physical	10.9	10.0
Mental retardation	10.7	7.8
Hearing impairment*	11.3	5.2
Learning disability	7.0	9.0
Vision impairment*	8.6	2.9
Substance abuse	5.9	6.0
Traumatic brain injury	1.2	3.2
All other conditions	1.0	0.9
Total	100.0	100.0
Significance of disability		
Most significant/significant	80.8	84.4
Nonsignificant	19.2	15.6
Total	100.0	100.0
Onset of disability		
Congenital*	30.7	22.9
Acquired*	69.3	77.1
Total	100.0	100.0

*Significant difference ($p < .05$).

Table C-2. Receipt of SSI/DI at Study Entry, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Type of benefit	Persons achieving an employment outcome	Persons not achieving an employment outcome
Receiving financial assistance at study entry*	43.9	55.1
Type of financial assistance, percentage of all consumers		
SSI/disabled*	13.7	22.3
Mean (median) months receiving	54.7 (36.0)	54.9 (48.0)
Mean (median) monthly amount	$395.72 ($422.00)	$417.21 ($446.00)
SSDI*	9.7	14.9
Mean (median) months receiving*	61.5 (36.0)	59.2 (48.0)
Mean (median) monthly amount	$540.64 ($520.00)	$586.01 ($545.00)
Primary source of support among persons receiving financial assistance		
Benefits*	71.8	82.2
Family or friends*	20.4	14.7
Self (earnings)*	7.8	3.1
Work history of persons receiving SSI/DI		
Never worked for 2 consecutive weeks*	7.8	11.4
Have worked, but not in 2 years prior to application to VR	38.3	45.2
Have worked in 2 years prior to VR entry, but not working at application to VR	32.3	35.2
Working at application to VR	21.6	8.3
Total	100.0	100.0

*Significant difference ($p < .05$).

Table C-3. Functional Status and Psychosocial Characteristics of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome[a]

	Persons achieving an employment outcome	Persons not achieving an employment outcome
Functional status[b]	***Mean***	***Mean***
Gross motor*	1.84	1.80
Cognitive	1.83	1.84
Personal care*	1.98	1.97
Psychosocial characteristics[c]		
Self-esteem*	2.53	2.40
Self-efficacy	2.33	2.25
Belief events are controlled by powerful others	1.66	1.69

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on these composite measures range from 1 to 2.

[c] Values on these composite measures range from 1 to 3.

Table C-4. Demographic Characteristics of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Characteristic	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
Gender		
Male	51.5	51.2
Female	48.5	48.8
Total	100.0	100.0
Age		
< 21	0.4	0.3
22 - 29	18.9	21.9
30 - 39	24.0	20.1
40 - 49	26.6	30.5
50 - 59*	17.6	18.0
60 - 64	4.5	5.5
>64*	8.1	3.7
Total	100.0	100.0
Mean	43.6	41.9
Median	42.0	42.0
Race/ethnicity		
White	85.7	80.4
African-American	12.7	17.7
Alaska Native or American Indian	0.6	0.7
Asian or Pacific Islander	1.0	1.2
Total	100.0	100.0
Of Hispanic origin	10.4	12.4
Marital status		
Married	31.5	24.4
Widowed	4.8	2.0
Divorced	14.7	18.0
Separated	5.1	7.2
Never married	43.9	48.4
Total	100.0	100.0
Number of dependents		
Mean*	0.9	0.8
Median	0.0	0.0
Minimum	0.0	0.0
Maximum	11.0	12.0

*Significant difference ($p < .05$).

Table C-5. Educational Characteristics of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Characteristic	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
Educational level at application		
Less than high school diploma/GED	22.4	27.8
High school/GED	64.0	60.7
Two-year associate's degree	5.6	4.5
Four-year bachelor's degree	5.8	5.7
Master's degree	1.9	0.9
Doctoral degree	0.3	0.3
Total	100.0	100.0
Received special education services in high school	25.9	23.7
Reading achievement level		
Mean	8.2	8.3
Median	8.3	9.0
Mathematics achievement level		
Mean	7.6	7.5
Median	7.0	7.0

*Significant difference ($p < .05$).

Table C-6. Work History of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Status	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
General work history		
Never worked for two consecutive weeks*	5.5	9.0
Have worked, but not in 2 years prior to application to VR	26.3	32.7
Have worked in two years prior to VR entry, but not working at application to VR	34.9	43.0
Working at application to VR*	33.3	15.3
Total	100.0	100.0
Number of jobs held		
None*	5.5	9.0
One	37.4	38.8
Two	29.6	26.6
Three	13.1	11.1
Four	5.2	4.1
Five or more	2.2	1.9
Do not know	7.1	8.5
Number of years in each job for consumers with a work history		
Mean	3.7	3.4
Median	2.0	1.0
Minimum	0.0	0.0
Maximum	36.0	31.0

*Significant difference ($p < .05$).

Table C-7. Work Status of VR Consumers Who Were Working at Application, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Characteristic	Persons achieving an employment outcome	Persons not achieving an employment outcome
	Mean (median)	Mean (median)
Number of years in job*	5.2 (3.0)	4.6 (2.0)
Hours worked per week	33.0 (38.0)	32.1 (35.0)
Hourly wages	$7.79 ($6.00)	$7.38 ($5.50)
For persons working at application, type of job	***Percentage***	***Percentage***
Competitive labor market	90.1	91.4
Extended employment	4.6	4.5
Supported employment	2.4	0.9
Homemaker	0.1	0.0
Unpaid family worker	0.4	0.0
Other	2.5	3.2
Total	100.0	100.0
For persons working at application, type of occupation		
Professional, managerial, technical	22.2	17.2
Clerical/sales	23.3	18.4
Service	28.5	33.2
Machine trades	3.7	4.3
Benchwork	4.0	4.8
Structural work	4.9	4.7
Processing	1.7	2.3
Agriculture	2.4	2.1
Miscellaneous	9.3	13.0
Total	100.0	100.0

*Significant difference ($p < .05$).

Table C-8. Labor Force Status of VR Consumers not Working at Application, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Labor Force Status	Percentage	
	Persons achieving an employment outcome	Persons not achieving an employment outcome
Not working, but looking for work	44.0	41.6
Not working, and not looking for work*	28.4	32.0
Student	15.9	15.5
Homemaker	7.7	7.7
Trainee or worker in noncompetitive environment	0.8	1.3
Unpaid family worker	2.3	1.9
Volunteer worker	0.9	0.2

*Significant difference ($p < .05$).

Table C-9. Characteristics of Most Recent Job of VR Consumers Who Were not Working at Application, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Characteristic	Persons achieving an employment outcome	Persons not achieving an employment outcome
	Mean (median)	*Mean (median)*
Number of years in job	3.7 (2.0)	3.6 (1.0)
Hours worked per week	35.2 (40.0)	35.3 (40.0)
Hourly wages	$7.03 ($5.75)	$8.60 ($5.75)
For persons not working at application but who ever worked, type of most recent job	*Percentage*	*Percentage*
Competitive labor market	89.6	90.8
Extended employment	3.9	3.6
Supported employment*	2.8	1.3
Homemaker	0.3	0.2
Unpaid family worker	0.4	0.3
Other	3.0	3.9
Total	100.0	100.0
For persons not working at application but who ever worked, occupational type of most recent job		
Professional, managerial, technical	21.6	22.6
Clerical/sales	17.7	17.2
Service	27.3	27.5
Machine trades	5.1	5.1
Benchwork*	4.5	5.9
Structural work	4.5	4.2
Processing	2.2	1.7
Agriculture	2.1	1.5
Miscellaneous	15.0	14.3
Total	100.0	100.0

*Significant difference ($p < .05$).

Table C-10. Career-Related Interests and Knowledge of VR Consumers, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome[a]

Characteristic	Persons achieving an employment outcome	Persons not achieving an employment outcome
Interest and knowledge[b]	***Mean***	***Mean***
Of specific jobs*	2.62	2.58
Of different jobs	2.61	2.54
Nonmonetary benefits of jobs	2.81	2.83
Career advancement	2.29	2.35
Information gathering skills*	2.49	2.39
Occupational type of vocational goal	***Percentage***	***Percentage***
Professional, managerial, technical	34.6	36.2
Clerical/sales	17.9	17.6
Service	20.5	22.4
Machine trades	3.0	2.8
Benchwork	7.2	6.7
Structural work	3.1	3.4
Processing	0.9	0.5
Agriculture	1.4	1.1
Miscellaneous	4.0	3.3
Other	2.9	2.3
Homemaker	4.4	3.7
Total	100.0	100.0

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on composite measures range from 1 to 3.

Table C-11. Motivation for Applying for VR Services, Comparing Persons Who Achieved an Employment Outcome with Those Not Achieving an Employment Outcome

Motivation for application to VR[a]	Percentage	
	Persons achieving an employment outcome	Persons not achieving outcome
To obtain medical treatment	18.9	17.1
To obtain an assistive device or service*	21.7	13.7
To obtain counseling or psychotherapy	23.6	26.2
Required by Social Security	4.7	5.1
VR suggested by another agency	45.0	47.2
A friend or family member recommended VR	30.7	28.2
For help in getting or keeping a job	77.0	80.9
To obtain help for vocational training or college*	64.0	78.7
Prior VR experience		
Persons with prior VR closures	17.2	17.8
Number of prior closures		
Mean	1.26	1.21
Median	1.00	1.00

*Significant difference ($p < .05$).

[a] Multiple responses were possible

APPENDIX D

TABLES ON ACHIEVEMENT OF COMPETITIVE EMPLOYMENT OUTCOMES

Table D-1. Disability Characteristics of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Type of disability		
Orthopedic, including amputation*	28.8	16.6
Mental illness	17.8	15.5
Nonorthopedic physical*	12.2	6.5
Mental retardation*	7.0	23.5
Hearing impairment*	12.8	6.1
Learning disability*	8.2	2.9
Vision impairment*	4.5	23.0
Substance abuse*	6.6	3.5
Traumatic brain injury	1.2	1.4
All other conditions	1.0	1.1
Total	100.0	100.0
Significance of disability		
Most significant/significant*	77.5	92.3
Nonsignificant*	22.5	7.7
Total	100.0	100.0
Onset of disability		
Congenital	29.1	36.5
Acquired	70.9	63.5
Total	100.0	100.0

*Significant difference ($p < .05$).

Table D-2. Receipt of SSI/DI at Study Entry, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Type of benefit	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Receiving financial assistance at study entry*	38.7	62.4
Type of financial assistance, percentage of all consumers		
SSI/disabled*	10.0	27.3
Mean (median) months receiving	53.0 (36.0)	56.9 (36.0)
Mean (median) monthly amount	$396.56 ($422.07)	$394.62 ($423.00)
SSDI*	8.5	14.3
Mean (median) months receiving	59.8 (35.0)	64.9 (36.0)
Mean (median) monthly amount	$554.23 ($529.00)	$510.55 ($467.00)
Primary source of support among persons receiving financial assistance		
Benefits*	68.2	79.6
Family or friends	21.6	17.8
Self (earnings)*	10.2	2.6
Work history of persons receiving SSI/DI		
Never worked for 2 consecutive weeks*	5.8	11.6
Have worked, but not in 2 years prior to application to VR	37.3	40.3
Have worked in 2 years prior to VR entry, but not working at application to VR	34.8	27.5
Working at application to VR	22.2	20.5
Total	100.0	100.0

*Significant difference ($p < .05$).

Table D-3. Functional Status and Psychosocial Characteristics of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment[a]

	Persons achieving competitive employment	Persons achieving noncompetitive employment
Functional status[b]	***Mean***	***Mean***
Gross motor*	1.86	1.78
Cognitive*	1.89	1.60
Personal care	1.98	1.97
Psychosocial characteristics[c]		
Self-esteem	2.53	2.51
Self-efficacy	2.34	2.33
Belief events are controlled by powerful others	1.66	1.67

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on these composite measures range from 1 to 2.

[c] Values on these composite measures range from 1 to 3.

Table D-4. Demographic Characteristics of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Gender	***Percentage***	***Percentage***
Male	53.0	46.3
Female	47.0	53.7
Total	100.0	100.0
Age		
<=21	0.4	0.2
22 - 29	19.1	18.0
30 - 39	24.8	21.1
40 - 49	28.9	18.7
50 - 59	18.3	15.1
60 - 64	4.8	3.1
>64*	3.8	23.7
Total	100.0	100.0
Mean*	41.9	50.0
Median	41.0	46.0
Race/ethnicity		
White	85.2	87.3
African-American	13.0	11.6
Alaska Native or American Indian	0.7	0.3
Asian or Pacific Islander	1.1	0.8
Total	100.0	100.0
Of Hispanic origin	11.3	8.0
Marital status		
Married	33.6	23.9
Widowed*	2.1	14.6
Divorced	15.6	11.3
Separated	5.5	4.0
Never married	43.3	46.2
Total	100.0	100.0
Number of dependents		
Mean*	1.0	0.6
Median	0.0	0.0
Minimum	0.0	0.0
Maximum	8.0	11.0

*Significant difference ($p < .05$).

Table D-5. Educational Characteristics of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Educational level at application		
Less than high school diploma/GED	22.0	23.6
High school/GED	63.7	65.2
Two-year associate's degree	5.6	5.2
Four-year bachelor's degree	6.2	4.5
Master's degree	2.1	1.4
Doctoral degree	0.4	0.1
Total	100.0	100.0
Received special education services in high school*	22.9	36.7
Reading achievement level		
Mean*	8.5	6.5
Median	9.0	5.5
Mathematics achievement level		
Mean*	7.9	6.2
Median	7.3	5.0

*Significant difference ($p < .05$).

Table D-6. Work History of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Status	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
General work history		
Never worked for two consecutive weeks*	4.3	9.8
Have worked, but not in 2 years prior to application to VR*	21.6	43.3
Have worked in two years prior to VR entry, but not working at application to VR*	37.6	25.2
Working at application to VR*	36.5	21.6
Total	100.0	100.0
Number of jobs held		
None*	4.3	9.8
One*	37.2	51.5
Two	33.3	27.1
Three*	16.5	5.6
Four*	5.9	4.3
Five or more*	2.7	1.1
Do not know	0.1	0.6
Number of years in each job for consumers with a work history		
Mean	3.6	4.1
Median	2.0	2.0
Minimum	0.0	0.0
Maximum	36.0	33.0

*Significant difference ($p < .05$).

Table D-7. Work Status of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Persons achieving competitive employment	Persons achieving noncompetitive employment
	Mean (median)	Mean (median)
Number of years in job	5.2 (3.0)	5.1 (3.0)
Hours worked per week*	33.6 (40.0)	29.0 (30.0)
Hourly wages*	$8.12 ($6.30)	$5.43 ($4.50)
For persons working at application, type of job	***Percentage***	***Percentage***
Competitive labor market*	94.6	59.2
Extended employment*	2.1	21.8
Supported employment*	0.8	13.5
Homemaker	0.0	0.8
Unpaid family worker	0.3	0.8
Other	2.2	3.9
Total	100.0	100.0
For persons working at application, type of occupation		
Professional, managerial, technical*	23.6	13.0
Clerical/sales	23.6	21.5
Service	28.1	31.1
Machine trades	3.9	2.5
Benchwork	3.6	7.0
Structural work*	5.5	0.7
Processing	1.5	2.7
Agriculture*	2.7	0.6
Miscellaneous*	7.6	20.9
Total	100.0	100.0

*Significant difference ($p < .05$).

Table D-8. Labor Force Status of VR Consumes Not Working at Application Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Labor Force Status	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
Not working, but looking for work	44.1	43.4
Not working, and not looking for work	27.6	32.6
Student	16.6	12.4
Homemaker	7.6	8.5
Trainee or worker in noncompetitive environment	0.7	1.1
Unpaid family worker*	2.6	0.5
Volunteer worker	0.8	1.4

*Significant difference ($p < .05$).

Table D-9. Characteristics of Most Recent Job of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Characteristic	Persons achieving competitive employment	Persons achieving noncompetitive employment
	Mean (median)	*Mean (median)*
Number of years in job	3.6 (2.0)	4.3 (2.0)
Hours worked per week	35.6 (40.0)	33.6 (40.0)
Hourly wages*	$7.40 ($6.00)	$5.38 ($4.50)
For persons not working at application but who ever worked, type of most recent job	*Percentage*	*Percentage*
Competitive labor market*	94.0	72.3
Extended employment*	1.6	12.9
Supported employment*	1.3	8.8
Homemaker	0.0	1.5
Unpaid family worker	0.5	0.2
Other	2.7	4.3
Total	100.0	100.0
For persons not working at application but who ever worked, occupational type of most recent job		
Professional, managerial, technical*	22.9	15.6
Clerical/sales	18.4	15.3
Service	27.3	27.0
Machine trades	4.8	6.2
Benchwork	4.5	4.9
Structural work*	5.2	2.0
Processing	2.3	1.8
Agriculture	2.1	1.9
Miscellaneous*	12.5	25.3
Total	100.0	100.0

*Significant difference ($p < .05$).

Table D-10. Career-Related Interests and Knowledge of VR Consumers Who Achieved an Employment Outcome, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment[a]

Characteristic	Persons achieving competitive employment	Persons achieving noncompetitive employment
Interest and knowledge[b]	***Mean***	***Mean***
Of specific jobs*	2.65	2.45
Of different jobs*	2.65	2.40
Nonmonetary benefits of jobs*	2.82	2.71
Career advancement*	2.32	2.14
Information gathering skills*	2.51	2.34
Occupational type of vocational goal	***Percentage***	***Percentage***
Professional, managerial, technical	34.2	36.1
Clerical/sales	17.8	18.3
Service	21.4	17.4
Machine trades	3.1	2.6
Benchwork	6.9	8.6
Structural work	2.8	4.2
Processing	1.0	0.6
Agriculture	1.4	1.4
Miscellaneous	4.0	4.1
Other	2.9	2.7
Homemaker	4.5	4.1
Total	100.0	100.0

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on composite measures range from 1 to 3.

Table D-11. Motivation for Applying for VR Services, Comparing Persons Who Entered Competitive Employment with Those Entering Noncompetitive Employment

Motivation for application to VR[a]	Percentage	
	Persons achieving competitive employment	Persons achieving noncompetitive employment
To obtain medical treatment	19.6	16.6
To obtain an assistive device or service	21.9	21.1
To obtain counseling or psychotherapy	24.8	19.8
Required by Social Security	4.5	5.5
VR suggested by another agency	44.7	45.9
A friend or family member recommended VR	31.3	28.7
For help in getting or keeping a job	80.2	67.0
To obtain help for vocational training or college*	68.2	50.7
Prior VR experience		
Persons with prior VR closures	16.2	20.8
Number of prior closures		
Mean	1.25	1.27
Median	1.00	1.00

*Significant difference ($p < .05$).

[a] Multiple responses were possible.

APPENDIX E

TABLES ON CHARACTERISTICS OF CONSUMERS WITH SIGNIFICANT AND NONSIGNIFICANT DISABILITY

Table E-1. Disability Characteristics of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Type of disability		
Orthopedic, including amputation	27.0	31.3
Mental illness*	21.6	13.7
Nonorthopedic physical*	9.9	18.9
Mental retardation*	10.2	4.1
Hearing impairment	9.1	7.0
Learning disability*	6.8	12.3
Vision impairment*	7.3	2.5
Substance abuse*	5.0	8.8
Traumatic brain injury*	2.2	0.3
All other conditions	0.9	1.3
Total	100.0	100.0
Significance of disability		
Most significant/significant	100.0	0.0
Nonsignificant	0.0	100.0
Total	100.0	100.0
Onset of disability		
Congenital*	29.9	22.7
Acquired*	70.1	77.3
Total	100.0	100.0

*Significant difference ($p < .05$).

Table E-2. Receipt of SSI/DI at Study Entry, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Type of benefit	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Receiving financial assistance at study entry*	50.8	28.5
Type of financial assistance, percentage of all consumers		
SSI/disabled*	19.1	2.9
Mean (median) months receiving	55.3 (36.0)	32.9 (12.0)
Mean (median) monthly amount	$407.48 ($434.00)	$447.17 ($458.00)
SSDI*	13.4	1.4
Mean (median) months receiving*	61.1 (36.0)	22.3 (13.0)
Mean (median) monthly amount	$563.78 ($526.00)	$564.15 ($534.00)
Primary source of support among persons receiving financial assistance		
Benefits*	76.8	68.3
Family or friends	17.9	22.2
Self (earnings)	5.3	9.5
Work history of persons receiving SSI/DI		
Never worked for 2 consecutive weeks*	10.3	6.7
Have worked, but not in 2 years prior to application to VR*	42.0	32.3
Have worked in 2 years prior to VR entry, but not working at application to VR	32.9	44.6
Working at application to VR*	14.8	16.4
Total	100.1	100.0

*Significant difference ($p < .05$).

Table E-3. Functional Status and Psychosocial Characteristics of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant[a]

	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Functional status[b]	***Mean***	***Mean***
Gross motor*	1.81	1.87
Cognitive*	1.82	1.93
Personal care*	1.97	1.99
Psychosocial characteristics[c]		
Self-esteem*	2.48	2.54
Self-efficacy	2.32	2.37
Belief events are controlled by powerful others	1.66	1.62

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on these composite measures range from 1 to 2.

[c] Values on these composite measures range from 1 to 3.

Table E-4. Demographic Characteristics of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Gender	***Percentage***	***Percentage***
Male*	51.6	47.6
Female	48.5	52.4
Total	100.0	100.0
Age		
<21	0.6	0.9
22 - 29	22.2	22.6
30 - 39	23.2	21.3
40 - 49*	26.8	29.8
50 - 59	16.7	16.7
60 - 64	4.3	4.5
>64	6.1	4.3
Total	100.0	100.0
Mean	42.1	41.4
Median	41.0	41.0
Race/ethnicity		
White	84.9	82.8
African-American	13.4	16.2
Alaska Native or American Indian	0.7	0.3
Asian or Pacific Islander	1.0	0.6
Total	100.0	100.0
Of Hispanic origin	9.7	13.0
Marital status		
Married*	26.7	33.7
Widowed	3.8	2.9
Divorced	15.5	17.5
Separated	5.4	6.7
Never married*	48.6	39.2
Total	100.0	100.0
Number of dependents		
Mean*	0.8	1.1
Median	0.0	1.0
Minimum	0.0	0.0
Maximum	12.0	8.0

*Significant difference ($p < .05$).

Table E-5. Educational Characteristics of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Educational level at application		
Less than high school diploma/GED*	23.6	28.7
High school/GED	63.0	61.7
Two-year associate's degree	5.1	4.9
Four-year bachelor's degree*	6.2	4.1
Master's degree*	1.8	0.5
Doctoral degree	0.3	0.2
Total	100.0	100.0
Received special education services in high school*	26.1	17.3
Reading achievement level		
Mean	8.4	8.6
Median	9.0	9.0
Mathematics achievement level		
Mean*	7.6	8.2
Median	7.0	8.0

*Significant difference ($p < .05$).

Table E-6. Work History of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Status	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
General work history		
Never worked for two consecutive weeks*	8.4	4.9
Have worked, but not in 2 years prior to application to VR*	29.2	20.6
Have worked in two years prior to VR entry, but not working at application to VR	37.7	39.8
Working at application to VR*	24.7	34.8
Total	100.0	100.1
Number of jobs held		
None*	8.4	4.9
One*	38.3	33.2
Two	26.8	29.5
Three*	11.9	15.2
Four*	4.3	6.2
Five or more	2.0	2.7
Do not know	8.3	8.4
Number of years in each job for consumers with a work history		
Mean	3.5	3.4
Median	2.0	2.0
Minimum	0.0	0.0
Maximum	34.0	36.0

*Significant difference ($p < .05$).

Table E-7. Work Status of VR Consumers Receiving Services Who Were Working at Application, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
	Mean (median)	Mean (median)
Number of years in job	4.9 (2.0)	5.4 (3.0)
Hours worked per week*	31.5 (35.0)	34.5 (40.0)
Hourly wages	$7.66 ($6.00)	$7.13 ($5.80)
For persons working at application, type of job	***Percentage***	***Percentage***
Competitive labor market*	87.2	96.8
Extended employment*	5.9	1.2
Supported employment*	2.6	0.0
Homemaker	0.1	0.0
Unpaid family worker	0.5	0.3
Other	3.6	1.8
Total	100.0	100.0
For persons working at application, type of occupation		
Professional, managerial, technical	21.7	16.8
Clerical/sales	20.9	25.9
Service	29.9	29.5
Machine trades	3.8	4.8
Benchwork*	5.0	2.1
Structural work	3.7	6.9
Processing	1.3	2.9
Agriculture	2.3	2.2
Miscellaneous	11.3	9.0
Total	100.0	100.0

*Significant difference ($p < .05$).

Table E-8. Labor Force Status of VR Consumers not Working at Application, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Labor Force Status	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Not working, but looking for work	39.2	38.4
Not working, and not looking for work	30.0	31.7
Student	19.5	19.5
Homemaker	7.2	8.1
Trainee or worker in noncompetitive environment	1.2	0.4
Unpaid family worker	2.0	1.1
Volunteer worker		

*Significant difference ($p < .05$).

Table E-9. Characteristics of Most Recent Job of VR Consumers Receiving Services Who Were not Working at Application, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Characteristic	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
	Mean (median)	*Mean (median)*
Number of years in job	3.6 (1.0)	3.3 (1.0)
Hours worked per week*	34.8 (40.0)	36.2 (40.0)
Hourly wages	$7.45 ($5.60)	$7.18 ($6.00)
For persons not working at application but who ever worked, type of most recent job	***Percentage***	***Percentage***
Competitive labor market*	89.0	95.7
Extended employment*	4.1	0.8
Supported employment*	2.4	0.9
Homemaker*	0.3	0.1
Unpaid family worker	0.4	0.3
Other*	4.0	2.3
Total	100.0	100.0
For persons not working at application but who ever worked, occupational type of most recent job		
Professional, managerial, technical	22.1	18.9
Clerical/sales	17.5	19.2
Service	27.5	29.2
Machine trades	5.1	4.7
Benchwork	5.1	3.6
Structural work*	3.9	6.8
Processing	2.0	2.0
Agriculture	2.0	1.9
Miscellaneous	15.0	13.7
Total	100.0	100.0

*Significant difference ($p < .05$).

Table E-10. Career-Related Interests and Knowledge of VR Consumers Receiving Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant[a]

Characteristic	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
Interest and knowledge[b]	***Mean***	***Mean***
Of specific jobs*	2.58	2.66
Of different jobs	2.58	2.64
Nonmonetary benefits of jobs	2.82	2.83
Career advancement *	2.29	2.41
Information gathering skills	2.47	2.47
Occupational type of vocational goal	***Percentage***	***Percentage***
Professional, managerial, technical	35.0	33.4
Clerical/sales	17.7	16.7
Service	21.2	21.5
Machine trades	3.0	2.9
Benchwork	7.1	8.1
Structural work	3.4	3.0
Processing	0.8	1.1
Agriculture	1.4	1.6
Miscellaneous	4.0	3.9
Other*	2.4	5.3
Homemaker	4.2	2.8
Total	100.0	100.0

*Significant difference ($p < .05$).

[a] Numerical differences in means on these composite measures are difficult to interpret; the reader should rely on significance of differences to aid interpretation.

[b] Values on composite measures range from 1 to 3.

Table E-11. Motivation for Applying for VR Services, Comparing Persons Whose Disabilities are Significant or Most Significant with Those Whose Disabilities are Nonsignificant

Motivation for application to VR[a]	Percentage	
	Persons with significant or most significant disabilities	Persons with nonsignificant disabilities
To obtain medical treatment*	14.2	28.1
To obtain an assistive device or service	17.6	17.2
To obtain counseling or psychotherapy	24.9	24.5
Required by Social Security *	5.1	3.1
VR suggested by another agency	45.5	49.8
A friend or family member recommended VR	29.1	31.1
For help in getting or keeping a job	75.7	77.1
To obtain help for vocational training or college	74.9	71.8
Prior VR experience		
Persons with prior VR closures*	17.4	12.5
Number of prior closures		
Mean*	1.26	1.15
Median	1.00	1.00

*Significant difference ($p < .05$).

[a] Multiple responses were possible.

APPENDIX F

TABLES ON CORRELATIONS BETWEEN CONSUMER CHARACTERISTICS AND ELIGIBILITY, RECEIPT OF SERVICES, EMPLOYMENT OUTCOMES, AND COMPETITIVE EMPLOYMENT OUTCOMES

Table F-1. Correlations Between Consumer Characteristics and Eligibility

	Eligibility	Significance of disability	Congenital versus acquired disability	Nonorthopedic physical disability	Mental retardation	Hearing impairment	Receipt of any financial assistance	Receipt of SSI or SSDI	Receipt of other financial assistance	Receipt of SSI-Disabled
Eligibility	1.00									
Significance of disability	0.15	1.00								
Congenital versus acquired disability	0.09	ns	1.00							
Nonorthopedic physical disability	-0.06	-0.09	-0.06	1.00						
Mental retardation	0.07	0.07	0.40	-0.10	1.00					
Hearing impairment	0.05	ns	0.07	-0.10	-0.07	1.00				
Receipt of any financial assistance	ns	0.14	ns	-0.04	0.08	-0.05	1.00			
Receipt of SSI or SSDI	ns	0.19	0.05	ns	0.14	-0.05	0.58	1.00		
Receipt of other financial assistance	ns	ns	-0.07	ns	-0.05	ns	0.62	-0.28	1.00	
Receipt of SSI-Disabled	ns	0.15	0.11	ns	0.19	ns	0.44	0.76	-0.21	1.00
Self-esteem	ns	-0.06	0.05	0.04	ns	0.10	-0.11	-0.12	ns	-0.08
Belief events are controlled by powerful others	-0.05	0.06	0.06	-0.06	0.13	ns	0.07	0.09	ns	0.08
Never married	0.04	0.06	0.37	ns	0.24	-0.08	ns	0.10	-0.12	0.15
Alaska Native/American Indian	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Less than high school diploma/GED	ns	ns	0.14	ns	0.19	ns	ns	ns	ns	ns
Working at application	ns	-0.09	0.08	ns	ns	0.15	-0.17	-0.13	-0.08	-0.10
Working at application in supported employment or extended employment	ns	ns	0.11	ns	0.23	ns	0.08	0.10	ns	0.11
Working at application in clerical or sales	ns	ns	ns	ns	ns	0.10	-0.07	-0.06	ns	-0.05
Working at application, other	ns	-0.09	0.06	ns	ns	0.13	-0.17	-0.13	-0.08	-0.11
Not working at application, student, unpaid family worker, or volunteer	0.08	ns	ns	ns	ns	ns	-0.05	-0.08	ns	-0.06

Table F-1. (continued)

	Self-esteem	Belief events are controlled by powerful others	Never married	Alaska Native/American Indian	Less than high school diploma/GED	Working at application	Working at application in supported employment or extended employment	Working at application in clerical or sales	Working at application, other	Not working at application, student, unpaid family worker, or volunteer
Eligibility										
Significance of disability										
Congenital versus acquired disability										
Nonorthopedic physical disability										
Mental retardation										
Hearing impairment										
Receipt of any financial assistance										
Receipt of SSI or SSDI										
Receipt of other financial assistance										
Receipt of SSI-Disabled										
Self-esteem	1.00									
Belief events are controlled by powerful others	-0.40	1.00								
Never married	ns	0.09	1.00							
Alaska Native/American Indian	ns	ns	ns	1.00						
Less than high school diploma/GED	ns	0.10	0.18	ns	1.00					
Working at application	0.21	-0.07	ns	ns	ns	1.00				
Working at application in supported employment or extended employment	ns	0.06	0.07	ns	ns	0.13	1.00			
Working at application in clerical or sales	0.07	-0.05	ns	ns	ns	0.19	ns	1.00		
Working at application, other	0.19	-0.07	ns	ns	ns	0.95	-0.05	-0.08	1.00	
Not working at application, student, unpaid family worker, or volunteer	ns	ns	0.07	ns	ns	-0.19	ns	ns	-0.18	1.00

ns = Not significant.

Table F-2. Correlations Between Consumer Characteristics and Receipt of Services

	Receipt of services	Gross motor function	Cognitive function	Personal care function	Self-esteem	Interaction between cognitive function and Self-esteem	Knowledge of specific jobs	Information gathering skills	Receipt of any financial assistance	Receipt of SSI or SSDI	Receipt of other financial assistance
Receipt of services	1.00										
Gross motor function	0.04	1.00									
Cognitive function	ns	0.30	1.00								
Personal care function	0.04	0.48	0.32	1.00							
Self-esteem	0.04	0.07	0.11	ns	1.00						
Interaction between cognitive function and Self-esteem	0.04	0.20	0.57	0.17	0.88	1.00					
Knowledge of specific jobs	0.06	0.08	0.19	0.05	0.22	0.27	1.00				
Information gathering skills	0.05	0.07	0.20	ns	0.23	0.29	0.44	1.00			
Receipt of any financial assistance	ns	-0.12	-0.16	-0.05	-0.10	-0.16	-0.05	-0.05	1.00		
Receipt of SSI or SSDI	ns	-0.09	-0.22	-0.09	-0.10	-0.18	-0.05	-0.05	0.59	1.00	
Receipt of other financial assistance	ns	-0.05	ns	0.03	ns	ns	ns	ns	0.59	-0.30	1.00
Working at application	ns	0.14	0.08	0.06	0.15	0.16	0.08	0.08	-0.24	-0.18	-0.11
Not working at application, student	0.04	0.07	0.04	ns	0.04	0.05	0.05	0.05	-0.04	-0.04	ns
Not working at application, volunteer	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Never worked	-0.04	ns	-0.12	ns	ns	-0.07	-0.08	-0.03	ns	0.08	-0.06
Applied to VR to receive AT devices/ services	0.05	-0.16	-0.13	-0.17	0.06	ns	0.04	ns	-0.04	-0.03	ns
Orthopedic disability	ns	-0.42	0.06	-0.23	0.10	0.11	ns	0.04	ns	-0.08	0.06
Hearing impairment	0.03	0.12	0.07	0.05	0.07	0.09	0.06	ns	-0.03	ns	ns
Vision impairment	ns	ns	-0.28	ns	0.07	-0.08	-0.03	ns	0.07	ns	0.09
Congenital versus acquired disability	0.03	0.17	-0.19	0.04	0.05	-0.05	-0.04	ns	-0.03	0.06	-0.10
Number of dependents	ns	-0.09	0.09	-0.05	ns	0.06	-0.03	0.04	0.05	-0.10	0.16

Table F-2. (continued)

	Working at application	Not working at application, student	Not working at application, volunteer	Never worked	Applied to VR to receive AT devices/services	Orthopedic disability	Haring impairment	Vision impairment	Congenital versus acquired disability	Number of dependents
Receipt of services										
Gross motor function										
Cognitive function										
Personal care function										
Self-esteem										
Interaction between cognitive function and Self-esteem										
Knowledge of specific jobs										
Information gathering skills										
Receipt of any financial assistance										
Receipt of SSI or SSDI										
Receipt of other financial assistance										
Working at application	1.00									
Not working at application, student	-0.17	1.00								
Not working at application, volunteer	-0.03	ns	1.00							
Never worked	-0.18	-0.09	ns	1.00						
Applied to VR to receive AT devices/ services	0.13	-0.06	ns	-0.06	1.00					
Orthopedic disability	-0.04	-0.04	ns	-0.06	0.05	1.00				
Hearing impairment	0.13	-0.04	ns	ns	0.36	-0.18	1.00			
Vision impairment	ns	-0.03	ns	ns	0.17	-0.14	-0.06	1.00		
Congenital versus acquired disability	0.08	0.07	ns	0.20	ns	-0.20	0.13	0.04	1.00	
Number of dependents	ns	-0.06	ns	-0.09	0.07	0.14	0.03	ns	-0.17	1.00

ns = Not significant.

Table F-3. Correlations Between Consumer Characteristics and Employment Outcomes

	Employment outcome	Working at application	Gross motor function	Cognitive function	Personal care function	Self-esteem	Receipt of any financial assistance	Vision impairment	Hearing impairment	Mental illness	Mental retardation	Orthopedic disability
Employment outcome	1.00											
Working at application	0.18	1.00										
Gross motor function	0.09	0.14	1.00									
Cognitive function	-0.03	0.11	0.33	1.00								
Personal care function	0.06	0.05	0.47	0.29	1.00							
Self-esteem	0.14	0.16	0.09	0.10	0.03	1.00						
Receipt of any financial assistance	-0.11	-0.23	-0.10	-0.15	-0.05	-0.10	1.00					
Vision impairment	0.12	-0.04	-0.09	-0.47	ns	0.07	0.06	1.00				
Hearing impairment	0.11	0.15	0.12	0.09	0.05	0.08	-0.04	-0.08	1.00			
Mental illness	-0.10	-0.08	0.18	0.13	0.09	-0.22	0.07	-0.14	-0.15	1.00		
Mental retardation	0.03	ns	0.11	-0.23	0.04	-0.03	0.11	-0.07	-0.07	-0.13	1.00	
Orthopedic disability	-0.04	-0.04	-0.38	0.10	-0.22	0.09	ns	-0.18	-0.18	-0.33	-0.17	1.00
Never worked	-0.04	-0.18	ns	-0.11	ns	ns	ns	ns	ns	-0.03	0.15	-0.06
Receipt of SSI or SSDI	-0.15	-0.17	-0.07	-0.18	-0.08	-0.10	0.59	-0.04	-0.03	0.11	0.20	-0.08
Receipt of other financial assistance	ns	-0.10	-0.05	ns	ns	ns	0.59	0.11	ns	-0.03	-0.06	0.05
Applied to VR to receive AT devices/ services	0.11	0.14	-0.16	-0.14	-0.16	0.07	-0.04	0.19	0.38	-0.16	-0.09	ns
Applied to VR to obtain support for education	-0.13	-0.04	0.04	0.21	ns	ns	ns	-0.16	-0.12	0.05	-0.13	0.12
Knowledge of specific jobs	0.04	0.08	0.08	0.20	0.05	0.21	-0.05	ns	0.06	ns	-0.14	ns
Information gathering skills	0.07	0.08	0.07	0.20	ns	0.23	-0.05	ns	ns	-0.04	-0.07	0.04
Age	0.07	-0.03	-0.28	-0.20	-0.06	ns	0.10	0.36	0.09	-0.04	-0.18	0.05
Congenital versus acquired disability	0.05	0.07	0.18	-0.13	0.04	0.05	ns	ns	0.11	-0.14	0.39	-0.19
Number of dependents	ns	ns	-0.06	0.14	-0.04	ns	0.04	-0.09	0.05	ns	-0.11	0.15
Nonwhite	-0.08	-0.06	ns	-0.03	ns	ns	0.07	-0.05	0.03	-0.03	0.06	-0.04

Table F-3. (continued)

	Never worked	Receipt of SSI or SSDI	Receipt of other financial assistance	Applied to VR to receive AT devices/services	Applied to VR to obtain support for education	Knowledge of specific jobs	Information gathering skills	Age	Congenital versus acquired disability	Number of dependents	Nonwhite
Employment outcome											
Working at application											
Gross motor function											
Cognitive function											
Personal care function											
Self-esteem											
Receipt of any financial assistance											
Vision impairment											
Hearing impairment											
Mental illness											
Mental retardation											
Orthopedic disability											
Never worked	1.00										
Receipt of SSI or SSDI	0.08	1.00									
Receipt of other financial assistance	-0.05	-0.30	1.00								
Applied to VR to receive AT devices/ services	-0.06	-0.04	ns	1.00							
Applied to VR to obtain support for education	-0.03	-0.04	ns	-0.12	1.00						
Knowledge of specific jobs	-0.08	-0.05	ns	0.04	0.12	1.00					
Information gathering skills	-0.03	-0.05	ns	ns	0.08	0.44	1.00				
Age	-0.14	ns	0.13	0.21	-0.23	ns	-0.03	1.00			
Congenital versus acquired disability	0.20	0.08	-0.10	ns	-0.05	-0.04	ns	-0.35	1.00		
Number of dependents	-0.10	-0.10	0.14	0.07	0.03	-0.03	0.03	0.09	-0.15	1.00	
Nonwhite	0.07	0.04	0.05	ns	-0.04	ns	-0.11	-0.06	ns	ns	1.00

ns = Not significant.

Table F-4. Correlations Between Consumer Characteristics and Competitive Employment Outcomes

	Competitive employment	Orthopedic disability	Mental illness	Mental retardation	Hearing disability	Learning disability	Vision impairment	Substance abuse	Receipt of SSI or SSDI	Receipt of other financial assistance
Competitive employment	1.00									
Orthopedic disability	0.08	1.00								
Mental illness	-0.05	-0.35	1.00							
Mental retardation	-0.21	-0.17	-0.13	1.00						
Hearing disability	0.07	-0.18	-0.15	-0.07	1.00					
Learning disability	ns	-0.19	-0.15	-0.07	-0.08	1.00				
Vision impairment	-0.14	-0.14	-0.11	-0.05	-0.06	-0.06	1.00			
Substance abuse	0.08	-0.17	-0.13	-0.06	-0.07	-0.07	-0.05	1.00		
Receipt of SSI or SSDI	-0.22	-0.08	0.11	0.18	ns	-0.10	ns	-0.06	1.00	
Receipt of other financial assistance	ns	0.06	ns	-0.06	ns	-0.05	0.10	0.07	-0.30	1.00
Gross motor function	0.11	-0.42	0.18	0.09	0.12	0.15	ns	0.11	-0.09	-0.05
Cognitive function	0.34	0.05	0.11	-0.27	0.07	ns	-0.28	0.07	-0.21	ns
Personal care function	ns	-0.23	0.10	0.04	0.05	0.06	ns	0.04	-0.09	0.03
Knowledge of specific jobs	0.18	ns	ns	-0.14	0.05	ns	ns	0.04	-0.04	ns
Knowledge of different jobs	0.22	0.08	-0.03	-0.21	0.03	-0.04	ns	0.04	-0.09	ns
Information gathering skills	0.13	0.04	-0.04	-0.07	ns	0.04	ns	ns	-0.04	ns
Nonmonetary benefits of jobs	0.16	0.04	-0.03	-0.09	ns	ns	-0.07	ns	ns	-0.05
Career advancement	0.12	ns	-0.07	ns	ns	0.09	-0.06	ns	-0.04	ns
Applied to VR to obtain medical treatment	0.05	0.05	-0.06	-0.06	ns	-0.10	0.04	ns	-0.11	ns
Applied to VR because required by Social Security	-0.05	ns	ns	0.11	ns	ns	ns	ns	0.18	-0.05
Achievement level–reading	0.17	0.24	0.15	-0.45	-0.05	-0.24	ns	0.10	-0.16	0.07
Achievement level–arithmetic	0.19	0.21	0.09	-0.41	ns	-0.17	ns	0.07	-0.19	0.06
Received special education services	-0.11	-0.21	-0.09	0.43	ns	0.37	-0.04	-0.08	0.10	-0.08
Working at application	0.07	-0.05	-0.08	ns	0.13	0.04	ns	ns	-0.18	-0.11
Not working at application, worked within 2 years	0.07	0.10	ns	-0.09	-0.10	ns	-0.05	ns	-0.10	0.12
Never worked	-0.10	-0.06	-0.03	0.17	ns	0.08	ns	-0.05	0.09	-0.06
Significance of disability	-0.13	ns	0.09	0.05	ns	-0.05	ns	-0.05	0.22	-0.04
Age	-0.12	0.11	ns	-0.17	0.07	-0.28	0.14	ns	0.03	0.12
Nonwhite	ns	-0.05	-0.05	0.05	0.04	ns	ns	0.07	0.03	0.06

Table F-4. (continued)

	Gross motor function	Cognitive function	Personal care function	Knowledge of specific jobs	Knowledge of different jobs	Information gathering skills	Nonmonetary benefits of jobs	Career advancement	Applied to VR to obtain medical treatment	Applied to VR because required by Social Security
Competitive employment										
Orthopedic disability										
Mental illness										
Mental retardation										
Hearing disability										
Learning disability										
Vision impairment										
Substance abuse										
Receipt of SSI or SSDI										
Receipt of other financial assistance										
Gross motor function	1.00									
Cognitive function	0.30	1.00								
Personal care function	0.48	0.33	1.00							
Knowledge of specific jobs	0.08	0.19	0.05	1.00						
Knowledge of different jobs	0.03	0.25	ns	0.60	1.00					
Information gathering skills	0.07	0.20	ns	0.44	0.51	1.00				
Nonmonetary benefits of jobs	0.03	0.11	ns	0.32	0.26	0.12	1.00			
Career advancement	0.06	0.09	0.03	0.22	0.15	0.12	0.48	1.00		
Applied to VR to obtain medical treatment	-0.09	ns	ns	ns	0.04	ns	0.04	0.06	1.00	
Applied to VR because required by Social Security	-0.05	-0.07	-0.04	-0.05	-0.04	ns	-0.06	0.03	0.04	1.00
Achievement level–reading	-0.13	0.36	ns	0.18	0.28	0.12	0.08	-0.11	0.05	-0.11
Achievement level–arithmetic	-0.09	0.36	ns	0.17	0.26	0.15	0.05	-0.11	0.09	-0.12
Received special education services	0.16	-0.22	0.05	-0.07	-0.18	-0.03	ns	0.06	-0.09	0.07
Working at application	0.14	0.08	0.06	0.08	0.10	0.08	0.07	ns	0.05	-0.08
Not working at application, worked within 2 years	-0.03	0.08	ns	ns	0.04	ns	ns	ns	ns	ns
Never worked	ns	-0.12	ns	-0.08	-0.15	-0.03	-0.10	ns	ns	0.05
Significance of disability	-0.07	-0.11	-0.07	-0.05	-0.04	ns	-0.04	-0.08	-0.14	0.05
Age	-0.24	ns	-0.05	ns	0.11	-0.03	-0.07	-0.19	0.13	ns
Nonwhite	-0.04	-0.08	ns	ns	-0.08	-0.11	0.07	0.19	0.06	ns

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Table F-4. (continued)

	Achievement level–reading	Achievement level–arithmetic	Received special education services	Working at application	Not working at application, worked within 2 years	Never worked	Significance of disability	Age	Nonwhite
Competitive employment									
Orthopedic disability									
Mental illness									
Mental retardation									
Hearing disability									
Learning disability									
Vision impairment									
Substance abuse									
Receipt of SSI or SSDI									
Receipt of other financial assistance									
Gross motor function									
Cognitive function									
Personal care function									
Knowledge of specific jobs									
Knowledge of different jobs									
Information gathering skills									
Nonmonetary benefits of jobs									
Career advancement									
Applied to VR to obtain medical treatment									
Applied to VR because required by Social Security									
Achievement level–reading	1.00								
Achievement level–arithmetic	0.74	1.00							
Received special education services	-0.56	-0.49	1.00						
Working at application	0.05	0.07	ns	1.00					
Not working at application, worked within 2 years	0.11	0.11	-0.08	-0.49	1.00				
Never worked	-0.23	-0.22	0.17	-0.18	-0.25	1.00			
Significance of disability	ns	-0.06	0.06	-0.10	ns	0.05	1.00		
Age	0.32	0.26	-0.36	ns	ns	-0.17	ns	1.00	
Nonwhite	-0.21	-0.20	0.03	-0.08	ns	0.06	-0.08	ns	1.00

ns = Not significant.

APPENDIX G

TABLES OF ODDS RATIOS

Table G-1. Odds Ratios Predicting Access to Services from Consumer Characteristics and Background Variables (R^2 ' .0695)

Characteristics	Odds Ratios
Disability Characteristics	
Significance	2.472
Congenital onset	1.424
Mental retardation	1.434
Hearing impairment	1.879
Nonorthopedic physical impairment	0.846
Psychosocial Characteristics	
Self-esteem	1.532
Work History	
Working at application (in extended or supported employment)	0.704
Working at application (in clerical/sales)	1.188
Working at application (other)	0.872
Not working at application, and a student, unpaid family worker, or volunteer	2.782

Table G-2. Odds Ratios Predicting Receipt of Services from Consumer Characteristics and Background Variables (R^2 = .0241)

Characteristics	Odds Ratios
Financial Assistance	
SSI/SSDI	0.899
Other financial assistance	1.138
Function	
Gross motor function	1.834
Work History	
Never worked	0.675
Career Knowledge and Motivation	
Knowledge of specific jobs	1.430
To obtain AT device or service	2.012

Table G-3. Odds Ratios Predicting Achievement of an Employment Outcome from Consumer Characteristics and Background Variables (R^2 ' .1448)

Characteristics	Odds Ratios
Disability Type	
Vision	3.875
Hearing impairment	1.775
Mental retardation	1.969
Orthopedic	1.166
Financial Assistance	
SSI/SSDI	0.524
Other	0.946
Functional and Psychosocial	
Gross motor function	1.933
Self-esteem	1.512
Work History	
Working at application	1.978
Career Knowledge and Motivations	
To obtain AT device or service	1.268
To obtain postsecondary education	0.668
Demographic Characteristics	
Number of dependents	1.052
Non-white	0.739

Table G-4. Odds Ratios Predicting Achievement of a Competitive Employment Outcome from Consumer Characteristics and Background Variables (R^2 = .2887)

Characteristics	Odds Ratios
Disability Characteristics	
Vision	0.441
Mental illness	0.431
Mental retardation	0.265
Significance	0.439
Financial assistance	
SSI/SSDI	0.527
Function	
Gross motor function	1.777
Cognitive function	6.035
Demographic Characteristics	
Age	0.965
Work history	
Working at application	1.205
Earnings at most recent job	1.030
Career Knowledge and Motivations	
Knowledge of different jobs	1.828
Nonmonetary benefits of jobs	1.093

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